

PYTHON

SECURITY FOR THE BEST®

[OWNER'S GUIDE]

M O D E L

R460

Limited lifetime consumer warranty

Directed Electronics ("Directed") promises to the original purchaser to repair or replace with a comparable reconditioned model any Directed unit (hereafter the "unit"), excluding without limitation the siren, the remote transmitters, the associated sensors and accessories, which proves to be defective in workmanship or material under reasonable use during the lifetime of the vehicle provided the following conditions are met: the unit was professionally installed and serviced by an authorized Directed dealer; the unit will be professionally reinstalled in the vehicle in which it was originally installed by an authorized Directed dealer; and the unit is returned to Directed, shipping prepaid with a legible copy of the bill of sale or other dated proof of purchase bearing the following information: consumer's name, telephone number and address; the authorized dealers name, telephone number and address; complete product description, including accessories; the year, make and model of the vehicle; vehicle license number and vehicle identification number. All components other than the unit, including without limitation the siren, the remote transmitters and the associated sensors and accessories, carry a one-year warranty from the date of purchase of the same. This warranty is non-transferable and is automatically void if: the original purchaser has not completed the warranty card and mailed it within ten (10) days of the date of purchase to the address listed on the card; the unit's date code or serial number is defaced, missing or altered; the unit has been modified or used in a manner contrary to its intended purpose; the unit has been damaged by accident, unreasonable use, neglect, improper service, installation or other causes not arising out of defects in materials or construction. The warranty does not cover damage to the unit caused by installation or removal of the unit. Directed, in its sole discretion, will determine what constitutes excessive damage and may refuse the return of any unit with excessive damage. TO THE MAXIMUM EXTENT ALLOWED BY LAW, ALL WARRANTIES, INCLUDING BUT NOT LIMITED TO EXPRESS WARRANTY, IMPLIED WARRANTY, WARRANTY OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF NON-INFRINGEMENT OF INTELLECTUAL PROPERTY, ARE EXPRESSLY EXCLUDED; AND DIRECTED NEITHER ASSUMES NOR AUTHORIZES ANY PERSON OR ENTITY TO ASSUME FOR IT ANY DUTY, OBLIGATION OR LIABILITY IN CONNECTION WITH ITS PRODUCTS. DIRECTED DISCLAIMS AND HAS ABSOLUTELY NO LIABILITY FOR ANY AND ALL ACTS OF THIRD PARTIES INCLUDING ITS AUTHORIZED DEALERS OR INSTALLERS. DIRECTED SECURITY SYSTEMS, INCLUDING THIS UNIT, ARE DETERRENTS AGAINST POSSIBLE THEFT. DIRECTED IS NOT OFFERING A GUARANTEE OR INSURANCE AGAINST VANDALISM, DAMAGE OR THEFT OF THE AUTOMOBILE, ITS PARTS OR CONTENTS; AND HEREBY EXPRESSLY DISCLAIMS ANY LIABILITY WHATSOEVER, INCLUDING WITHOUT LIMITATION, LIABILITY FOR THEFT, DAMAGE AND/OR VANDALISM. THIS WARRANTY DOES NOT COVER LABOR COSTS FOR MAINTENANCE, REMOVAL OR REINSTALLATION OF THE UNIT OR ANY

CONSEQUENTIAL DAMAGES OF ANY KIND. IN THE EVENT OF A CLAIM OR A DISPUTE INVOLVING DIRECTED OR ITS SUBSIDIARY, THE PROPER VENUE SHALL BE SAN DIEGO COUNTY IN THE STATE OF CALIFORNIA. CALIFORNIA STATE LAWS AND APPLICABLE FEDERAL LAWS SHALL APPLY AND GOVERN THE DISPUTE. THE MAXIMUM RECOVERY UNDER ANY CLAIM AGAINST DIRECTED SHALL BE STRICTLY LIMITED TO THE AUTHORIZED DIRECTED DEALER'S PURCHASE PRICE OF THE UNIT. DIRECTED SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES WHATSOEVER, INCLUDING BUT NOT LIMITED TO, ANY CONSEQUENTIAL DAMAGES, INCIDENTAL DAMAGES, DAMAGES FOR THE LOSS OF TIME, LOSS OF EARNINGS, COMMERCIAL LOSS, LOSS OF ECONOMIC OPPORTUNITY AND THE LIKE. NOTWITHSTANDING THE ABOVE, THE MANUFACTURER DOES OFFER A LIMITED WARRANTY TO REPLACE OR REPAIR THE CONTROL MODULE AS DESCRIBED ABOVE. Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights and you may also have other rights that vary from State to State.

This product may be covered by a Guaranteed Protection Plan ("GPP"). See your authorized Directed dealer for details of the plan or call Directed Customer Service at 1-800-876-0800. Directed security systems, including this unit, are deterrents against possible theft. Directed is not offering a guarantee or insurance against vandalism, damage or theft of the automobile, its parts or contents; and hereby expressly disclaims any liability whatsoever, including without limitation, liability for theft, damage and/or vandalism. Directed does not and has not authorized any person or entity to create for it any other obligation, promise, duty or obligation in connection with this security system.

Make sure you have all of the following information from your dealer:

A clear copy of the sales receipt, showing the following:

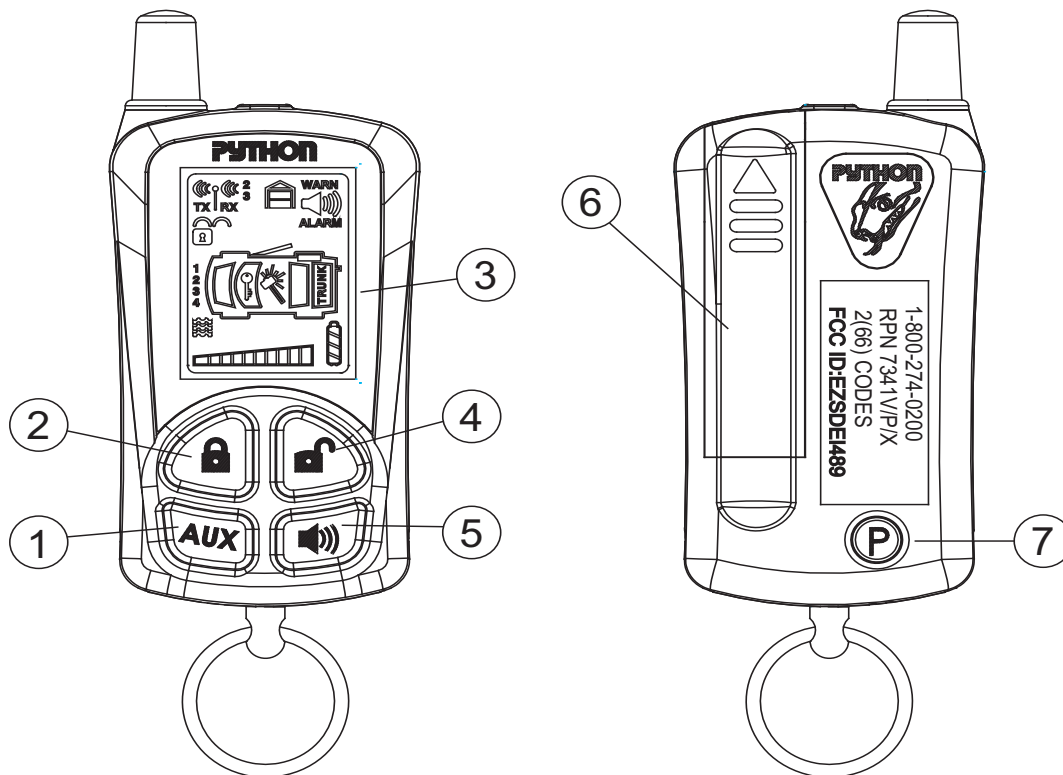
- Date of purchase
- Your full name and address
- Authorized dealer's company name and address
- Type of alarm installed
- Year, make, model and color of the automobile
- Automobile license number
- Vehicle identification number
- All security options installed on automobile
- Installation receipts

Table of contents

Limited lifetime consumer warranty	i
2-way LCD remote control	1
LCD screen	2
Standard remote configuration	3
What is included	4
Important information.	4
System maintenance	5
FCC/ID notice	6
Replacement remote controls.	7
2-way LCD remote control functions	7
Standard configurations (1-way and 2-way remote controls).	7
Standard LCD icon configurations (2-way only).	9
Remote operation	12
System signal paging features	12
Out of range notification	13
Programming LCD remote	14
To enter programming mode	14
Beeps/Vibration On/Off.	14
Illumination On/Off.	15
Page notification	15
To exit programming mode.	15
Using your system	16
Active arming	16
Passive arming	17
Multi-level security arming	18
Disarming.	19
Disarming without a transmitter.	21
Dome light control (optional).	22
Silent mode.	22
Panic mode	23
Valet mode	24
Nuisance prevention® circuitry	25
Auxiliary outputs (options)	26
Diagnostics	27
Arming diagnostics	27
Disarming diagnostics.	28
Table of zones	29
Interpreting zone diagnostics.	30

Owner recognition.	31
Rapid resume logic	32
Power saver mode	32
Programming.	33
Installation options	37
Vehicle recovery system (VRS®)	37
Arming the VRS	38
Triggered sequence, VRS	39
Disarming the VRS.	40
Security & convenience expansions	41
Glossary of terms	43
Quick reference guide	45

2-way LCD remote control



1. Auxiliary Channel Button

2. Arm Button

3. LCD Screen (see *LCD Screen*)

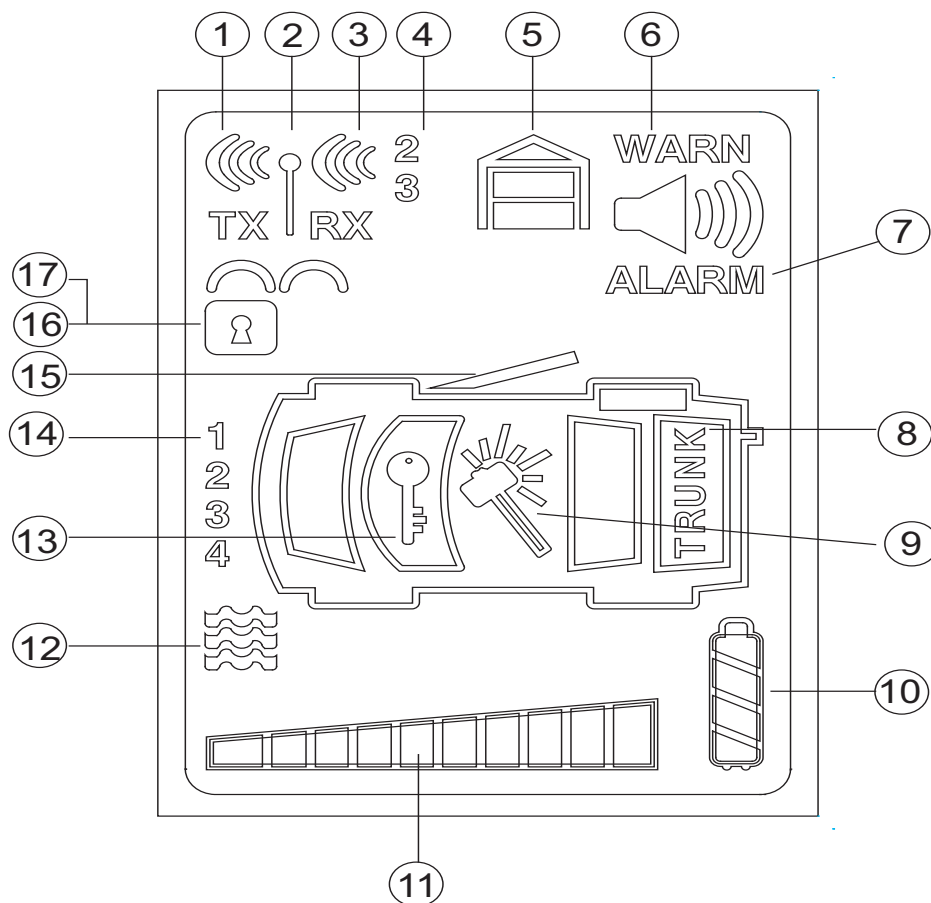
4. Disarm Button

5. Panic Button

6. Battery Compartment

7. Program Button

LCD screen



1. Transmit	10. Battery level indicator
2. Out of range	11. Remote sending
3. Receive	12. Vibrate mode
4. Aux Output 2 or 3	13. Ignition
5. Garage door (519H2 option)	14. Vehicle number
6. Warn Away®	15. Door
7. Alarm	16. Arm
8. Trunk or Hood	17. Disarm
9. Sensor	

Standard remote configuration



controls the **Lock–Arm/Panic On/Panic Off** function.



controls the **Unlock–Disarm/Panic Off** function.



controls **Silent Mode™** and an **Auxiliary Output (2)**.



or



controls the **Panic On/Off** function (hold for 2-seconds).



and



pressed together control an **Auxiliary Output (3)**.



(located on back of the remote) selects the vehicle to control and also provides user selection of LCD remote response .

What is included

- Control module
- 1 four-button 2-way LCD transmitter
- 1 four-button transmitter

note: On both remotes the panic button is the same color.

- Wire harnesses
- The 514N six-tone programmable siren
- In-vehicle status LED indicator light
- A push-button Valet switch
- Your warranty registration
- Failsafe® Starter Kill ready circuitry
(may require additional labor)
- 548T receiver/antenna

Important information

Congratulations on the purchase of your state-of-the-art vehicle security system. This system has been designed to provide years of trouble-free operation. Due to the complexity of this system, it must be installed by an authorized dealer only. Installation of this product by anyone other than an authorized dealer voids the warranty. All dealers are provided with preprinted dealer certificates to verify that they are authorized.

This owner's guide should help you to get the most out of your system. Please take the time to read it prior to using the system.

→ System maintenance

This system needs no specific maintenance beyond remote control battery replacement. The 2-way remote is powered by a 1.5V AAA battery. The 1-way remote is powered by a pair of 3V, CR2016 batteries.

Battery Level Indicator (2-way remote)

The Battery Level indicator has four level indicators that serve as a visual indication of battery charge. When the battery reaches a low charge level that requires replacement, the remote control will generate a single notification chirp, and the Battery Level indicator will flash continuously.



Battery Replacement (2-way remote)

Gently pull the end of the battery door away from the top of the remote control then slide the door up to expose the battery and remove the expired battery. Place the new battery into the remote control observing the correct polarity. When power is returned the remote control will display all icons in the LCD and generate all beeper tones once. Press any button on the remote to terminate the beeper tone review.

→ your warranty

Your warranty registration must be returned and the bar code serial number must not be removed. If the warranty registration is not returned, you do not have a warranty. It is also necessary to

keep your proof of purchase, which reflects that the product was installed by an authorized dealer. Make sure that you receive the warranty registration from your dealer.

→ FCC/ID notice

This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesirable operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device.

Directed Electronics, Inc.



**Tested to Comply
with FCC Standards**

Replacement remote controls

You can purchase replacement remote controls from your Authorized Dealer or on-line at the following web site:

www.directedstore.com

Once you receive your new remote control, please refer to instructions included on the remote packaging.

2-way LCD remote control functions

The LCD remote control buttons are used to send commands to the system. The descriptions below reflect the standard configuration for this system. The buttons can be custom configured for the user's specific needs by the installer. Also, the user can configure the LCD remote for certain responses (see *Programming LCD Remote* section).

Standard configurations (1-way and 2-way remote controls)



Button

The arming function is controlled by pressing this button for one second.



Button

The disarming function is controlled by pressing this button for one second.

AUX Button

Silent Mode™ and an optional auxiliary function are controlled by pressing this button. (Silent Mode™ works by pressing this button for less than one second before arming or disarming. An optional auxiliary function, such as trunk release, can be controlled by pressing this button for 1.5 seconds.)

The auxiliary output controls _____.

or **Button**

The panic feature is controlled by pressing this button for approximately two seconds.

and **Buttons**

An optional auxiliary convenience or expansion function that you have added to your system can be activated by pressing these buttons simultaneously.

The auxiliary output controls _____.

Program Button (on rear of 2-way LCD remote only)

Use this button to select the vehicle to control from the remote. Also use this button to configure response characteristics from the LCD remote (see *Programming 2-Way Remote*).

→ Standard LCD icon configurations (2-way only)



Icon

The transmit icon will be displayed while the remote control is transmitting a command to the vehicle.



Icon

The signal icon will be displayed if a command is transmitted to the vehicle but the command page is not received.



Icon

The receive icon will be displayed while the remote control is receiving a page from the vehicle.



Icon

The auxiliary and sensor icons will display which auxiliary is operating, or which security sensor (zone 2,4 or 7) is in Warn Away® or alarm state.



Icon

The garage door icon—for use with optional 519H2.



and Icons

The above Warn Away® displays when a security feature has been tripped, but not to full alarm.



and Icons

The above icons will display when a security feature has been tripped to a full alarm condition.



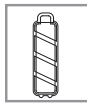
Icon

The trunk icon will display for full alarm by flashing for a few seconds and then display continuously until the page is cleared.



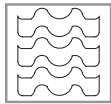
Icon

The shock sensor icon will display for both Warn Away® and full alarm by flashing for a few seconds and then display continuously until the page is cleared.



Icon

The battery icon always displays the current charge capacity remaining in the remote's battery.



Icon

The vibrate icon will always display if the remote is programmed for vibrator notification (see programming LCD remote section of the guide).



Icon

The ignition icon will display for full alarm by flashing for a few seconds and then display continuously until page is cleared.

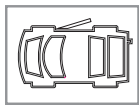
1
2
3
4

Icon

The vehicle icon always displays the current vehicle (maximum of 4 vehicles) being controlled by the remote. If a Warn Away® or alarm trigger should occur at one of the other vehicles, that vehicle's number will be displayed and the LCD will display that vehicle's status. To change back to the original vehicle selected,

press and release the program button until the vehicle number is shown.

For example, If the remote was originally on vehicle number 1 and a trigger page was received for vehicle number 2, the remote will show the trigger alarm and show number 2 on the display. After clearing the page, press and release the program button until number 1 is displayed. Now you can operate the alarm system on vehicle number 1.



Icon

The door icon will display for full alarm by flashing for a few seconds and then display continuously until the page is cleared.



Icon

The arm icon will flash when the system is locking the doors and display continuously until the system is armed.



Icon

The disarm icon will flash when the system is unlocking the doors and display continuously until the system is disarmed.

Transmitter functions

This system uses a computer-based learn routine to learn the transmitter buttons. This makes it possible to assign any transmitter button to any system function. The transmitter initially comes programmed with Standard Configuration, but may also be customized by an authorized dealer. The buttons described in this manual correspond to a Standard Configuration transmitter.

Remote operation

The system operates at 434 MHz and incorporates Directed's proprietary out-board technology transceiver. The high frequency combined with Binary Data communication achieves superior range with two-way communication.

System signal paging features

A page is the signal the control module sends to the remote control as confirmation of receipt of a command or alarm system status.

When the remote control receives a page it will generate a page notification to the user (notifications are audible beeps and-or vibration) and the LCD Icons will display the current system status.

Command Page

When a command (arm/disarm, or auxiliary channel) from the remote control is sent and received, the system will send a command page back to confirm receipt.

Alarm Page

If the alarm system is triggered while armed, an Alarm Page will be sent to the remote control. When the remote receives an Alarm Page, the LCD icons will display the alarm system status information and the remote control will generate beeps and-or vibration.


An Alarm Page alert is a series of 5 groups of 4 rapid beeps (shock, trunk, door, ignition, or hood trigger) and the LCD icon that caused the alarm will display. The remote will beep and or vibrate every 60 seconds to alert the user that the alarm system was triggered and will continue until the alarm page is cleared.

Page Recognition (Acknowledgement)

To clear a page alert/notification, quickly press any button on the remote control. This can be performed at any time during or after the page notification has occurred.

The remote control will not send a command to the system at this time; it will only clear future repeats of the page notification. The next time a button is pressed on the remote control it will send a command to the system.

→ Out of range notification

If a command is issued from the remote, but the remote is set to the incorrect vehicle or is beyond the range of the vehicle to receive the command, the remote responds with 3 set of 2 quick beeps and the  icon will flash 3-times.


Programming LCD remote

→ To enter programming mode

Press and hold the **P** button until one long beep is heard. Programming mode to customize the remote's response is now entered.

note: If no buttons are pressed within 5-seconds, programming mode will exit with 2-beeps.


→ Beeps/Vibration On/Off

Press  to select beeps/vibration On/Off. Beeps alone, vibration alone, beeps and vibration, or no beeps and vibration can be selected. Refer to the table below for these settings.

Beep/Vibrate settings	Programming response	Icon display*
Beeps only (default)	1-beep	Siren icon On
Vibrate only	1-vibrate	Vibrate icon On
Beep & Vibrate	1-beep and 1-vibrate	Vibrate and siren icon On
No Beep and No Vibrate	1 long beep	Vibrate and siren icons Off


***Note:** This is icon display during programming.

→ Illumination On/Off

Press  to select LCD backlight illumination On/Off. The LCD backlight will illuminate when a remote button is pressed, or an alarm status page is received.

LCD Backlight settings	Programming response
ON	1-beep, backlight ON
OFF	2-beeps, backlight OFF

→ Page notification

The remote control can be programmed to notify the user of a page (audibly beeping if the vehicle's status changes, e.g. door unlocked, engine started, vehicle violation, etc.). On the LCD remote press  to select page On/Off. One beep is page On, Two beeps is page Off. When programmed off the remote will not give any notification that a page was received from the vehicle.

Note: If programmed Off, **no alarms** will be notified to the remote. Command information (armed/disarmed) will be notified to the remote.


→ To exit programming mode


The LCD remote control will exit programming mode after 5-seconds of inactivity and will emit 2 long beep.

Using your system

The buttons described in this manual correspond to the standard configuration. Remember, this is not the only way your transmitter may be set up. It can be custom configured to meet your needs. See your installer for additional details.

Active arming


You can arm the system by pressing  of your remote for one second. When the system arms, from the vehicle you will hear a short siren sound, or chirp, and see the parking lights flash once. If the power door locks are controlled by the system, the doors will also lock. While the system is armed, the in-vehicle's status LED will flash approximately once per second, indicating that the system is actively protecting your vehicle. If you hear a second chirp after arming and note that the in-vehicle's status LED is flashing in groups, see the Diagnostics Section of this guide. This extra chirp is called Bypass Notification.

The LCD remote responds to active arming with one beep and the  icon will flash 5-times to indicate successful arming of the system.

If the LCD remote beeps twice after arming, the system has detected an active sensor that should be checked. For example, a door open icon will be displayed flashing 5-times on the LCD screen.

Passive arming

The system can be programmed to arm itself automatically (called passive arming). If the system is programmed for passive arming, it will automatically arm 30 seconds after the ignition is turned off and the system detects that you have left the vehicle by opening and closing a door. Whenever the system is in its 30-second passive arming countdown, the in-vehicle status LED will flash twice as fast as it does when the system is armed. At the 20-second point of the countdown, the siren will chirp to indicate that the system is about to arm. At the 30-second point, the parking lights will flash to indicate that the system is armed.

The LCD remote responds to passive arming with one beep and the  icon will flash 3 times to indicate successful arming of the system.

note: If any protected entry point (such as a door or a switch-protected trunk or hood) is open, the system will not passively arm (unless forced passive arming is programmed on. See Programming Options section.) Additionally, if a door, hood or trunk is triggered during the arming countdown, the 30-second countdown starts over.



When armed your vehicle is protected as follows:



- Light impacts trigger the Warn Away® signal. When triggered, the siren chirps and the parking lights flash for a few seconds.
- Heavy impacts trip a Triggered Sequence. The sequence consists of the siren sounding continuously and the parking lights flashing for a pre-programmed period, which can range in duration from 1 to 180 seconds.
- If a door is opened, the system will immediately start





chirping the siren and flashing the parking lights. Three seconds later, the siren output changes to a continuous blast. This progressive response gives you time to disarm the system with your LCD remote if you inadvertently open the door while the system is armed, while still providing instant response (even if the door is immediately closed).

- Turning on the ignition key will trip the same progressive response as opening a door.
- The optional starter kill prevents the vehicle's starter from cranking.
- Any full trigger of the alarm system will immediately send an alarm page to your remote informing you that your vehicle should be checked.




➔ **Multi-level security arming**

Multi-Level Security Arming allows you to select which of the security system's inputs or sensors will be active and which will be bypassed at the time that the system is armed. (See the *Table of Zones* section of this guide.) Pressing  again within five seconds of arming the security system will activate the Multi-Level Security Arming feature. Each time  is pressed again, a different security level is selected. The different security levels can be selected as follows:


- Press  once: The siren chirps once. The system is armed.
- Press  a second time within five seconds: The siren chirps twice followed by a long chirp. Zone 2 is now bypassed.


- Press  a third time within 5 seconds, the siren chirps 3 times then followed by a long chirp. Zone 4 is now bypassed.
- Press  a fourth time within five seconds: The siren chirps four times followed by a long chirp. Zone 2 and 4 are now bypassed.
- Press  a fifth time within five seconds: The siren chirps five times followed by a long chirp. All input zones, except the ignition are now bypassed.
- Hold down the  to begin the Multi-Level-Security Arming cycle over again.

note: Multi-Level Security Arming only applies to a single arming cycle. Once the system is disarmed and then re-armed, all the zones will be active again.

After each press of the  to reach the next level of security, the remote will emit normal arm notification (1 beep and 5 flashes of the  icon). For easiest operation in reaching each level of security, press  immediately **after** each notification.

➔ Disarming

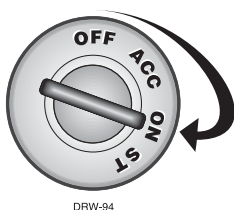
To disarm the system, press . You will hear two chirps, and the parking lights will flash twice. If the power locks are connected to the system, the doors will unlock. If the siren chirps either four or five times when disarming, refer to the *Diagnostics* section of this guide. This is called Tamper Alert.

The remote will indicate disarm notification with 2 beeps and 5 flashes of the  icon. If disarming after the system has been triggered, the remote control will send a diagnostic notification as a reminder. These diagnostic notifications are:

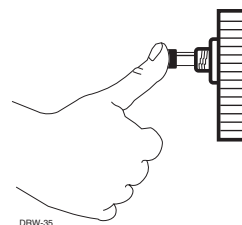
1. If a sensor triggered the system, the remote will emit 4 quick beeps and the LCD screen will indicate which sensor (5-flashes) tripped the alarm.
2. If a switch (Zone 1, 3, or 5) triggered the system, the remote will emit 4 quick beeps and the LCD screen will indicate which switch (5 flashes) tripped the alarm.
3. If the system was triggered so many times that NPC is active the remote will emit the above notifications with 5 beeps instead of 4.

→ Disarming without a transmitter

This feature allows you to disarm the security system without the remote transmitter should it be lost, damaged, or disabled. In order to disarm the system without a remote transmitter, you must have the vehicle's ignition key and know where the Valet button is located. Be sure to check with the installer for the location and the number of presses of the Valet button required to disarm the system.



To disarm the security system, turn the ignition to the ON position. Press the Valet button the preset number of times (one to




five times) within 15 seconds. After five seconds the system will disarm. If the system does not disarm, you may have waited too long; turn the ignition off and on and try again.

Location of Valet Button _____

Number of Pulses _____

important! The unit can be programmed to respond to one to five pulses of the Valet button for the disarm function. Be sure to check with the installer for the desired programming.

The LCD remote will indicate disarm notification with 4 quick beeps and 5 flashes of the  and triggered zone icons.

→ Dome light control (optional)

security only

The dome light activates for 30 seconds after the system is disarmed.

Ignition controlled

The dome light activates for 30 seconds after the ignition is turned Off.

door controlled

The dome light activates for 30 seconds after the system sees a door has closed. (If door was held open for longer than 3 minutes the dome light will not illuminate.)

full

The dome light activates for 30 seconds after seeing door closure, ignition, or security disarm. (This is the *factory* setting.)

→ Silent mode

To temporarily turn off the arm or disarm chirps, use Silent Mode™. Press **AUX** for less than one second before arming or disarming, and the confirmation chirp(s) will be eliminated for that one operation only. If you want the arm/disarm chirps turned off permanently, your dealer can do this for you.





note: The Warn Away® response to lighter impacts is bypassed if the system is armed using Silent Mode. This ensures that no chirps will be emitted by the siren in an area you want chirp-free. The system is still fully capable of triggering. Only the Warn Away® response is bypassed.


The LCD remote responds with the normal arm/disarm notifications in silent mode. (If the remote has beeps programmed On, the remote will beep.)

→ Panic mode





note: On both remotes the panic button is the same color.

LCD remote

If you are threatened in or near your vehicle, you can attract attention by triggering the system with your LCD remote. Just press  or  button for approximately two seconds, and you will enter Panic Mode. The siren will sound and the parking lights will flash for the programmed siren duration. To stop Panic Mode at any time, press  or  button on the LCD remote again.

The LCD remote responds with one beep and display of the  icon upon entering Panic Mode.

4-button remote

If you are threatened in or near your vehicle, you can attract attention by triggering the system with your transmitter. Just press  or  for approximately two seconds, and you will enter Panic Mode. The siren will sound and the parking lights will flash for the programmed siren duration. To stop Panic Mode at any time, press , or  on the remote transmitter again.

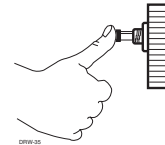
→ Valet mode

You can prevent your security system from automatically arming and triggering by using Valet Mode. This is very useful when washing the vehicle or having it serviced. In Valet Mode, the security system will not arm, even with the remote transmitter, but all convenience functions (door locks, trunk release, etc.) will continue to work normally.


To enter or exit Valet Mode:



1. Turn the ignition on.
2. Turn the ignition off.
3. Press and release the Valet button within 10 seconds.



The status LED will light solidly if you are entering Valet Mode, and it will go out if you are exiting Valet Mode.

The remote will respond with 5 flashes of the  icon and 2 beeps on entering or exiting Valet® Mode.

To enter or exit Valet Mode using the transmitter:

1. Open any vehicle door.

Quickly press the following buttons in the sequence indicated.

2. Press .
3. Press .
4. Press  again.

The in-vehicle status LED will light solidly if you are entering Valet® Mode, and it will go out if you are exiting Valet® Mode.

→ Nuisance prevention® circuitry

Your system has Directed's Nuisance Prevention® Circuitry (NPC®). It prevents annoying repetitive trigger sequences due to faulty door pin switches or environmental conditions such as thunder, jackhammers, airport noise, etc.

Example

If the alarm triggers three times within a 60-minute period and each time the same sensor or switch triggers the alarm, NPC® will interpret those triggers as false alarms. After the third trigger, NPC® ignores, or bypasses, that sensor or switch (along with any other sensors or switches sharing the same zone) for 60 minutes.

If the bypassed sensor tries to trigger the system while it is being bypassed, the 60-minute bypass period will start over. This ensures that a sensor that continually triggers will remain bypassed.


Doors are covered by NPC® differently; if the alarm is triggered by an open door for three full cycles, the doors will be bypassed until the trigger ceases.



note: Arming and disarming the system does not reset this function. In order to reset a bypassed zone, the same zone must not trigger for 60 minutes, or ignition is turned on. If testing your system, it is important to remember that the NPC® programming can cause zones to be bypassed and appear to stop working. If five chirps are heard when disarming, NPC® has been engaged. If you wish to clear the NPC® memory, turn the ignition key on.

NPC® is On/Off programmable. See your dealer and the *Programming* section of this guide for more information.

Auxiliary outputs (options)

This system also supplies outputs that can control convenience options such as remote control trunk release and window automation. Consult your dealer for available options for your system.

Channel 2 Trunk release: When connected, pressing  for 1.5 seconds will remotely release the vehicle trunk lid.

Channel 3 auxiliary output: When connected, pressing  and  will immediately activate this output to control an additional convenience option.

The remote will respond with a page notification consisting of one long beep and for 4 seconds displays the channel number on the LCD screen. This occurs at the remote after the system has received the command to activate any of the Auxiliary outputs.

Diagnostics

The microprocessor at the heart of your security system is constantly monitoring all of the switches and sensors that are connected to it. It detects any faulty switches and sensors and prevents them from disabling the entire system. The microprocessor will also record and report any triggers that occurred during your absence. Refer to the *System Status Chirps* and *Table of Zones* charts for diagnostic information.

Arming diagnostics

If the system is armed while an input is active (door open, sensor triggering, etc.) the unit will chirp once when arming and then one more time a few seconds later. This is called Bypass Notification.

note: Bypass Notification will not occur when using Silent Mode™ or if chirps have been programmed OFF.

The security system will ignore the input that was active when the system was armed, until the input goes away. Three seconds later the system will monitor that input normally. For example, if your vehicle has interior light exit delay, and you arm the system before the interior light goes out, you may hear Bypass Notification chirps. Once the light shuts off, however, the doors are monitored normally.

→ Disarming diagnostics

Extra disarm chirps are the Tamper Alert. If four chirps are heard when disarming, the system was triggered in your absence. If five chirps are heard, a zone was triggered so many times that Nuisance Prevention[®] Circuitry has bypassed that zone (see NPC section of this guide). The in-vehicle status LED will indicate which zone was involved. (See *Table of Zones* section of this guide.) The system will retain this information in its memory, and continue to chirp four or five times each time it is disarmed, until the next time the ignition key is turned on.

→ System status chirps

The siren will chirp when arming/disarming the system. The pattern of chirps will audibly report the system's status as described below.

Action	Number of Chirps	Description
Arm	1	System armed
Arm	1 (3-second delay), 1	System armed with Bypass Notification
Disarm	2	System disarmed
Disarm	4	System disarmed with Tamper Alert
Disarm	5	System disarmed NPC [®] active

→ Table of zones

The zone number is the number of LED flashes used by the system to identify that input. The standard input assignments are listed below, along with spaces to write in any optional sensors or switches you have had installed.

Zone - Number of LED Flashes	Description	Dealer-Installed Options
1	Instant trigger - often used for trunk pinswitches	
2	Shock sensor input - a light impact activates warn away and a heavier impact activates full alarm.	
3	Door switch trigger	
4	Optional sensor inputs for warn away and full alarm notification.	
5	Ignition trigger	

→ Interpreting zone diagnostics


Warn Away responses are not reported by arming or disarming diagnostics. If you receive a Bypass notification when arming or a Tamper Alert notification when disarming, look at the in-vehicle status LED. Active or triggered zones will be indicated by a pattern of blinks by this LED.

Example

If Zone 3 was active or triggered, the in-vehicle LED will blink three times with a two-second pause. Then it will blink three times again, and repeat until the ignition is turned on.

note: Your system stores the last six triggered zones in memory. If your system has been triggered but the LED has been reset by turning on the ignition, your dealer can still recall the last six zones that were triggered. Contact your dealer for details.

Code hopping

The receiver and transmitters each use mathematical formulas called algorithms to change their codes each time the transmitter is used. This technology has been developed to increase the security of the unit. The control unit knows what the next codes should be. This helps to keep the transmitter "in sync" with the control unit even if you use the remote control out of range of the vehicle. However, if the transmitter has been pressed many times out of range of the vehicle, or if the battery has been removed, it may get out of sync with the control unit and fail to operate the system. To re-sync the remote control press  of

the transmitter several times within range of the vehicle. The alarm will automatically re-sync and respond to the transmitters normally.

Owner recognition

Owner Recognition is a feature available exclusively from Directed. Using the Directed Bitwriter®, a hand-held programming tool, your dealer can program many of the system settings. The programmer makes it possible to program different settings for each transmitter that is used with the system. Then, whenever a specific transmitter is used, the system will recall the settings assigned to that transmitter. Owner Recognition lets up to four users of the system have different settings that meet their specific needs. It is almost like having four separate alarms in your vehicle, one for each user.

note: Owner Recognition cannot be programmed without a Directed Bitwriter® and the necessary software. Check with your dealer for more information.

Rapid resume logic

This Directed system will store its current state to non-volatile memory. If power is lost and then reconnected, the system will recall the stored state from memory. This means if the unit is in Valet Mode and the battery is disconnected for any reason, such as servicing the car, when the battery is reconnected the unit will still be in Valet Mode. This applies to all states of the system including arm, disarm, VRS®, and Valet Mode.

Power saver mode

Your system will automatically enter Power Saver Mode while armed or in Valet® Mode, after a period of time in which no operation has been performed. This lowers the current draw to the vehicle's battery. Power Saver Mode takes over under the following conditions:

- Power Saver when the system is armed: After the system has been armed for 24 hours, the in-vehicle LED will flash at half its normal rate, decreasing the system's current draw.
- Power Saver in Valet® Mode: When the system enters Valet® Mode the in-vehicle LED illuminates steadily. If the vehicle is not used (ignition is not turned on) for a period of one hour while the system is in Valet® Mode, the LED will shut off. If the system remains in Valet® Mode, the LED will come back on the next time the ignition is turned on and then back off.

Programming

Programming options control what your system does during normal operation, and require few or no additional parts. However, some may require additional installation labor.

The following is a list of the program settings, with the factory settings in **Bold**:

- **Active arming** (only with the remote) or passive arming (automatic arming 30-seconds after the last door has been closed).
- Arming/disarming confirmation siren chirps **on** or off.
- The ignition controlled door lock feature **on** or off: With this feature on, the doors will lock three seconds after the ignition is turned on, and the doors are closed, and unlock when the ignition is turned off. The system will not lock the doors when the ignition is turned on with any door open. The bitwriter is not needed to program these separately, it should be in the programming grid to do these 2 independently. Ignition lock and unlock are independent features and can be programmed separately.
- Passive door locking (with passive arming) or **active door locking** (only when arming with the remote). Passive locking allows the vehicle's doors to lock when the security system passively arms (after the 30 second countdown). This feature only works if passive arming has been programmed.

note: When programmed for passive arming and active lock, if the system is disarmed without a door being opened, the system will relock the doors when it passively rearms.

- Panic mode **enabled**/disabled with the ignition on: Some states have laws against siren capability in a moving vehicle.
- Forced passive arming **on** or off: If your system is programmed for passive arming and the forced passive arming feature has been programmed on, the system will passively arm after one hour, even if a protected entry has been left open. This feature is useful if a door has been left ajar when leaving the vehicle. Forced passive arming ensures that the security system will be armed in every situation.

note: When the system passively arms after one hour, the entry point that has been left open, and anything connected to the same zone, is bypassed and cannot trigger the system. However, the remaining inputs to the system are fully operational.

- Automatic Engine Disable (AED) on or **off**: The purpose of this feature is to protect the vehicle from being stolen at all times, regardless of whether or not the alarm is armed. If AED is programmed on, the starter of the vehicle will be disabled 30 seconds after the ignition is turned off. Once the key is turned off, the in-vehicle LED will flash slowly (one-half its normal armed rate) to indicate the AED arming cycle. Thirty seconds later, the starter of the vehicle will be disabled. To start the car, it will be necessary to disarm the system with the remote. It is also possible to disarm the AED

feature by turning the ignition key to the RUN position and pressing the Valet® button the programmed number of times. AED is disabled when the system is in Valet® Mode.

note: This feature will only function if the Failsafe® Starter Kill relay has been installed.

- Full trigger response **30** or 60 seconds: This determines how long the full triggered sequence lasts. Some states have laws regulating how long a security system can sound before it is considered a nuisance. If your installer is programming the security system with the Directed Bitwriter, the full triggered response can be programmed for any duration ranging from 1 to 180 seconds.
- Nuisance Prevention® Circuitry **on** or off: Please refer to the NPC® section of this manual for a complete explanation of how NPC® operates. If NPC® is programmed off, the security system will respond to inputs from any sensor indefinitely.


note: Because many states have laws regulating security systems, programming NPC® off may cause your system to violate state laws.

- **Comfort Closure Off:** Windows will close upon locking the vehicle.
- **Forced Passive Arming Off:** If passive arming is on and a door is left open the system will be armed after 30-seconds.
- **Panic with Ignition Off:** Prevents the Panic button on the remotes from activating panic with ignition On (not allowed in some states).

- Progressive door trigger **on** or off: When the system is armed and a door is opened, the system responds with ten chirps prior to beginning the full triggered sequence. If an instant trigger is desired, the progressive door trigger can be programmed off.
- Valet® pulse count: The number of presses of the Valet® button required to disarm the security system, AED, or the VRS® system can be programmed from one to five presses. The default setting is **one** press.
- Siren tones and chirp volume: The output of the Revenger® Soft Chirp® siren consists of six different tones in sequence. Any of these tones can be eliminated by your dealer, resulting in a unique, easily identifiable siren sound. The siren chirps can be either full volume or **six decibels quieter** than the full alarm blast.

Installation options

The system has many options that may require extra parts and labor. Some of the possibilities are listed here.

- Progressive unlocking: In most cars with electric power door locks, the system can be configured so that when the system is disarmed, only the driver's door unlocks. A second press of the  button unlocks the other doors.
- Vehicle Recovery System (VRS®): VRS is an anti-carjacking device designed to help in the safe recovery of your vehicle in case of a carjacking. Please refer to the Vehicle Recovery System section of this guide for a complete explanation of how the Vehicle Recovery System operates.

Vehicle recovery system (VRS®)

The optional VRS feature is designed to ensure that any unauthorized user of your vehicle (even if using your keys and remote control) will not be able to permanently separate you from your vehicle.

The VRS cannot prevent a carjacking attempt; however, it does ensure that if your vehicle is taken by an unauthorized user, it will be disabled (after several progressive warnings) as safely as possible. Should a carjacking occur, the VRS allows you to concern yourself with your personal safety without worrying about your property.

Directed has engineered this vehicle security system, the Failsafe® Starter Kill, and the VRS feature to provide the best combination of personal safety and property protection available. When properly installed, the system can never inadvertently stop your vehicle in traffic or on railroad tracks while the vehicle is in operation. It is unlike other systems that shut down your engine while it is running. This system is designed to perform starter interrupt, or starter kill. The Failsafe® Starter Kill cannot shut down an already-running engine – it can only prevent an engine from starting in the first place.

important! Any installation that allows this product to shut down a vehicle's engine when it is running is contrary to the product's design and intended usage, and Directed hereby expressly disclaims any liability resulting therefrom.

→ Arming the VRS

To arm the VRS, turn the ignition to the ON position and press the arm button on the remote transmitter for one second. The parking lights will flash and the siren will chirp once. This can be done before driving or while driving the vehicle. Once the system is armed, it will initiate its triggered sequence (see below) if any door is opened and closed. If you are forced from the vehicle, the system will trigger as the door is opened and closed. This is how the system works to combat intersection carjacking. To protect against parking lot carjacking, arm the VRS before leaving the vehicle. The system will now trigger automatically the next time you or anyone drives the vehicle. This helps to protect the vehicle

if someone takes your keys and remote transmitter by force in a parking lot.

note: If the VRS® system is armed while operating the vehicle and not disarmed prior to leaving the vehicle, it is still armed and will trigger the next time the vehicle is driven.

→ Triggered sequence, VRS

Fifteen seconds after the last door has closed, the in-vehicle LED will begin flashing. This delay is intended to allow you time to distance yourself from your vehicle in the event of a carjacking.

Forty-five seconds later, the siren begins chirping and the parking lights begin flashing. This time could be used to notify authorities that your vehicle has been hijacked, and tell them what the VRS will do next.

Fifteen seconds after the siren chirps begin, the siren's output will change to a continuous blast.

From this point on, when the ignition key is turned off, the VRS will immediately turn on the starter kill. This will prevent the vehicle from being restarted, thus immobilizing it at that spot.

Three minutes after the constant siren output begins, the flashing parking lights and the siren will stop. The starter kill will remain active until the system is disarmed. If the door is opened or the ignition is turned off and on in an attempt to restart the car, the siren and light flashing will begin again.


→ Disarming the VRS

Take the time to familiarize yourself with the VRS triggering sequence and the disarm procedure. It is important to recognize and identify the VRS trigger sequence and know how to disarm it in case of accidental activation.

Once the VRS is armed, it does not disarm automatically. You must disarm it the next time you operate the vehicle. You must disarm it with one of the following procedures:

If the system has not entered the triggered sequence (siren has not started chirping):

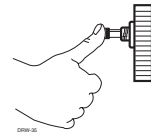


1. Turn the ignition on.
2. Press  on the transmitter for one second. The lights will flash and the siren will chirp twice.

If the system has entered the triggered sequence (siren has begun chirping), pressing the disarm button of the transmitter will not disarm VRS. To disarm the VRS during a VRS trigger sequence:



1. Turn the ignition on.
2. Press the Valet button the pre-programmed number of times to disarm the VRS system.



note: If the VRS® system has begun its chirping sequence, the ignition must be turned off, then on to disarm. If you are driving the vehicle at the time, pull to a safe place away from traffic and follow the triggered sequence disarm procedure.

Security & convenience expansions

Here we have listed only some of the many expansion options available. Please contact your dealer for a complete explanation of all the options available to you.

Audio Sensor: Metal on glass, glass cracking, and breaking glass each produce distinctive acoustic signatures. The 506T audio sensor uses a microphone to pick up sounds, and then analyzes them with proprietary acoustic software to determine if the glass has been struck.

Backup Battery: The 520T keeps the system armed, triggers the alarm and keeps the starter kill active if main battery power is disconnected.

Field Disturbance Sensor: An invisible dome of coverage is established by installing the 508D "radar" sensor. Your security system can then react to any intrusions into this field with the triggered sequence.

Garage Door: Remote control of your system can go beyond your vehicle. You can also control your automatic garage door using the 519H2 garage door opener with your remote control. Ask you dealer for details. Additional parts and labor required.

Headlight and Parking Light Automation: The 545T Nite-Lite® will automatically turn on your parking and headlights when it gets dark. In addition, the 545T will turn your headlights on whenever the windshield wipers are used. A transmitter function

can also be used to turn on your parking and headlights for a programmed time.

Power Trunk Release: The channel two output of the system can operate a factory power release for the vehicle's trunk or hatch. (An additional relay may be required.) If the factory release is not power activated, then Directed's 522T trunk release solenoid can often be added.

Power Window Control: Automatic power window control is provided with the 529T and 530T systems.

Tilt Sensor: The 507M tilt sensor can be added to your system to protect your car when its parked. It can protect your vehicle from being lifted to protect your expensive rims.

Valet Start System: For the ultimate in convenience, the Valet start system can start your vehicle, monitor engine functions, and power your climate control system with a push of a button. Over-rev protection, open-hood lockout, brake pedal shutoff, and automatic timer shutoff are all included. (This feature is only for automatic transmission, fuel-injected vehicles.)

Ultrasonic Sensor: Providing a field of protection inside your car using the 509U Ultrasonic sensor to protect your belongings.

Glossary of terms

ASK Amplitude Shift Keying—a method of transmitting data.

Control Unit: The "brain" of your system. Usually hidden under the dash area of the vehicle. It houses the microprocessor which monitors your vehicle and controls all of the system's functions.

Fail Safe Starter Kill: An automatic switch controlled by the security system which prevents the vehicle's starter from cranking whenever the system is armed. The vehicle is never prevented from cranking when the system is disarmed, in Valet mode, or should the starter interrupt switch itself fail. Your system is ready for this feature, however installation may require additional labor.

Input: A physical connection to the system. An input can be provided by a sensor, pinswitch or through an existing system in the vehicle, such as ignition or courtesy lights.

In-vehicle status LED: A light mounted somewhere in the vehicle. It is used to indicate the status of your system. It is also used to report triggers and faults in the system or sensors.

LCD: This is a Liquid Crystal Display used on your remote transmitter to display your vehicles status/alarm information.

Shock Sensor: This is a sensor mounted in the vehicle that is designed to pick up impacts to the vehicle or glass.

Siren: Noise generating device usually installed in the engine compartment of the vehicle. It is responsible for generating the

"chirps" you hear, as well as the six tones you hear while the alarm is triggered.

Transmitter: Hand-held, remote control which operates the various functions of your system.

Trigger or Triggered Sequence: This is what happens when the alarm "goes off" or "trips". The triggered response of your system consists of the siren sounding and parking light flashing for the programmed duration.

Valet Button: A small push-button switch mounted somewhere inside the vehicle. It is used to override the alarm when a transmitter is lost or damaged, or to enter or exit Valet mode.

Warn Away® Response: Lighter impacts to the vehicle will generate the Warning Zone response. It consists of several seconds of siren chirps and parking light flashes.


Zone: A zone is a separate input that the alarm can recognize as unique. Each input to the system is connected to a particular zone. Two or more inputs often share the same zone.




QUICK REFERENCE GUIDE

Cut along dotted line and fold for a quick and easy reference to keep in your purse or wallet.


To arm using your LCD remote

- You can activate, or arm, the system by pressing  on your remote for one second. When the system arms, you will hear a short siren sound, or chirp, and the parking lights will flash once. If the vehicle's power door locks have been connected to the system, the doors will lock.

To disarm using your LCD remote

- To disarm the system, press . You will hear two chirps, and the parking lights will flash twice. If power locks are connected to the system, the doors will unlock. If the siren chirps either four or five times when disarming, see Diagnostics section. This is called Tamper Alert.

Arming while driving

- Press  on your remote for two second while the vehicle is running. The system will chirp once and then once more to indicate that the ignition is on.

Disarming without a LCD remote

- Turn on the ignition. Press and release the Valet® button the programmed number of times within 15 seconds. After five seconds, the system will disarm. If it does not, you may have waited too long. Turn the ignition off and on and try again.

To enter or exit Valet® Mode

- Turn ignition to RUN position, then turn to OFF position. Press and release the Valet® button within 10 seconds. The in-vehicle status LED will light solid if you are entering Valet® Mode, and it will go out if you are exiting Valet® Mode.


To activate Panic Mode

- Press and hold  or  down for approximately two seconds.

To exit Panic Mode

- Press  or  on the remote.

To activate Silent Mode™

- Press  briefly before arming or disarming, and the confirmation chirp(s) will be eliminated for that one operation only.

Location of Valet® Button _____

Number of Valet® Button pulses for disarming _____





Vista, CA 92081
www.directed.com

**The company behind Python® Auto Security Systems
is Directed Electronics.**

Since its inception, Directed Electronics has had one purpose, to provide consumers with the finest vehicle security and car stereo products and accessories available. The recipient of nearly 100 patents and Innovations Awards in the field of advanced electronic technology, Directed Electronics is ISO 9001 registered.

Quality Directed Electronics products are sold and serviced throughout North America and around the world.

Call (800) 876-0800 for more information about our products and services.

© 2008 Directed Electronics, All rights reserved.

G3305P 2008-12



Directed Electronics is an
ISO 9001 registered company.

Directed Electronics is committed to delivering world class quality products and services that excite and delight our customers.

LMD305P0

PYTHON®

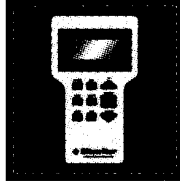
Responder 460

Installation Guide

NOTE: This product is intended for installation by a professional installer only! Any attempt to install this product by any person other than a trained professional may result in severe damage to a vehicle's electrical system and components.

Directed®
E L E C T R O N I C S

©2008 Directed Electronics, Vista, Ca.
N3305P- 2008-12



The Bitwriter® (p/n 998T)
requires chip version 2.4 or
newer to program this unit.

Bitwriter™, Code Hopping™, DEI®, Doubleguard®, ESP™, FailSafe®, Ghost Switch™, Learn Routine™, Nite-Lite®, Nuisance Prevention® Circuitry, NPC®, Revenger®, Silent Mode™, Soft Chirp®, Stinger®, Valet®, Vehicle Recovery System®, VRS®, and Warn Away® are all Trademarks or Registered Trademarks of Directed Electronics, Inc.

Contents

Primary Harness (H1) Wire Connection Guide.....	4
Primary Harness Wiring Diagram.....	4
Primary Harness Wiring Instructions.....	4
Door Lock Harness (H2), 3-PIN Connector	11
Plug-In LED and valet/program switch.....	12
Programmer Interface, 3-Pin BLACK Plug.....	13
Mounting the Antenna Receiver	13
On-Board Dual-Stage Shock Sensor	14
Optional Sensor Harness, 4-pin Connector	15
Programming Jumper.....	16
Light Flash Jumper	16
Bypassing Sensor Inputs.....	17
System Features Learn Routine	18
System Features Menus.....	21
Menu #1 - Basic Features.....	21
Menu #2 - Advanced Features	22
Feature Descriptions	22
Menu #1 - Basic Features.....	22
Menu #2 - Advanced Features	24
Transmitter/Receiver Learn Routine	27
Transmitter Configurations.....	30
Standard Configuration	30
Three-button configuration - Optional not included.....	30
Diagnostics.....	31
Arm/Disarm Diagnostics	31
System Status Chirps	31
Table of Zones.....	32
Long Term Event History.....	32
Multi-Level Security Arming.....	33
Optional Vehicle Recovery System (VRS).....	34
Nuisance Prevention® Circuitry.....	34
Rapid Resume Logic	34
Troubleshooting.....	35

Primary Harness (H1) Wire Connection Guide

Primary Harness Wiring Diagram

H1/1	ORANGE	(-) 500 mA Armed Output
H1/2	WHITE	(+)/(-) Selectable Light Flash Output
H1/3	WHITE/BLUE	(-) 200 mA Channel 3 Programmable Output
H1/4	BLACK/WHITE	(-) 200 mA Domelight Supervision Output
H1/5	GREEN	(-) Door Trigger Input, Zone 3
H1/6	BLUE	(-) Instant Trigger Input, Zone 1
H1/7	VIOLET	(+) Door Trigger Input, Zone 3
H1/8	BLACK	(-) Chassis Ground Input
H1/9	YELLOW	(+) Switched Ignition Input, Zone 5
H1/10	BROWN	(+) Siren Output
H1/11	RED	(+) Constant Power Input
H1/12	RED/WHITE	(-) 200 mA Channel 2 Output

Primary Harness Wiring Instructions

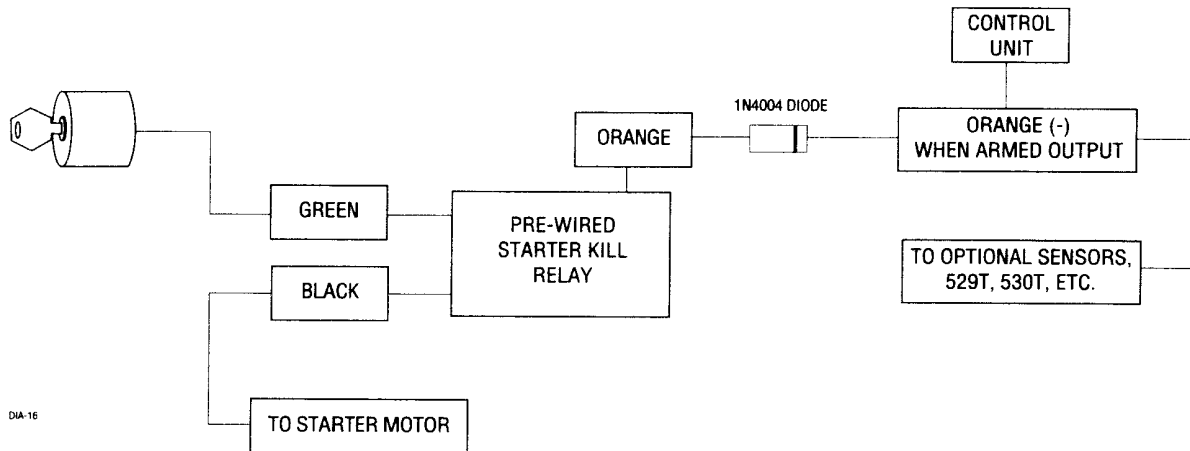
This guide describes in detail the connection of each wire. Also included are possible applications of each wire. This system was designed with the ultimate in flexibility and security in mind. Many of the wires have more than one possible function. Please read carefully to ensure a thorough understanding of this unit.

H1/1 ORANGE (-) ground-when-armed output

This wire supplies a (-) ground as long as the system is armed. This output ceases as soon as the system is disarmed. The orange wire is pre-wired to control the 8618 starter kill relay. It can supply up to 500 mA of current.

NOTE: If using the H1/1 Orange wire to activate an add-on accessory such as window automation, or voice module a 1Amp diode must be installed to ensure proper operation. Insert the diode as shown in the following diagram.

IMPORTANT! Never interrupt any wire other than the starter wire.

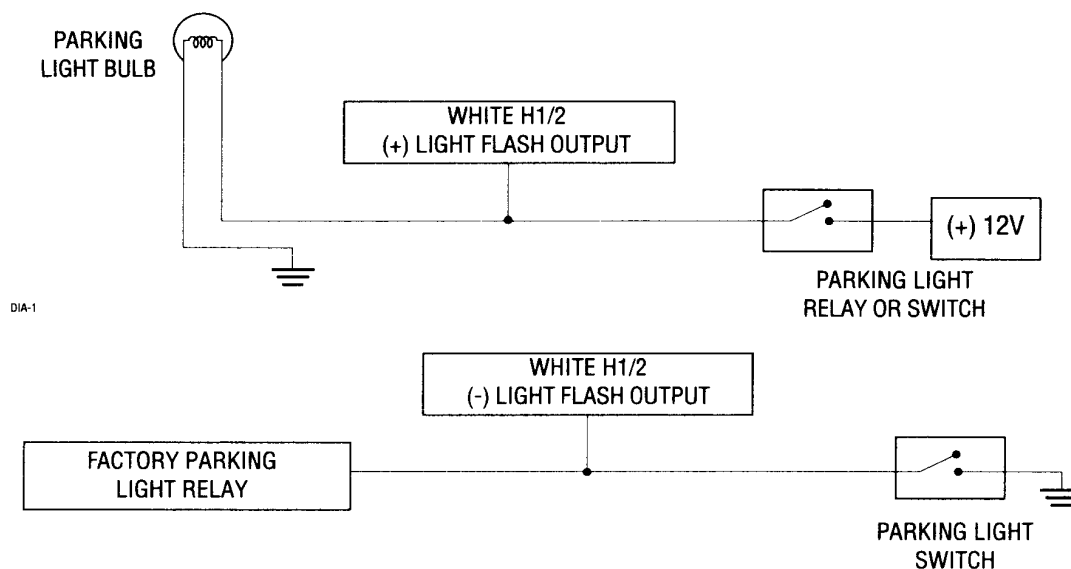


H1/2 WHITE (+/-) light flash output

As shipped, the H1/2 WHITE wire should be connected to the (+) parking light wire. If the light flash polarity jumper is moved to the (-) position (see the Programming Jumper section of this installation guide), this wire supplies a (-) 200 mA output.

NOTE: For parking light systems that draw 10 amps or more, the jumper must be switched to a (-) light flash output (see the Programming Jumpers section of this guide). P/N 8617 or a standard automotive SPDT relay must be used on the H1/2 light flash output wire.

IMPORTANT! DO NOT connect this wire to a negative vehicle light flash wire before changing the programming jumper to the negative polarity position or damage to vehicle light circuit may occur.



H1/3 WHITE/BBLUE 200 mA (-) channel 3 output

This wire provides a (-) 200 mA output whenever the transmitter button(s) controlling channel three is pressed. This output can be programmed to provide the following types of output (see System Features Learn Routine section of this guide):

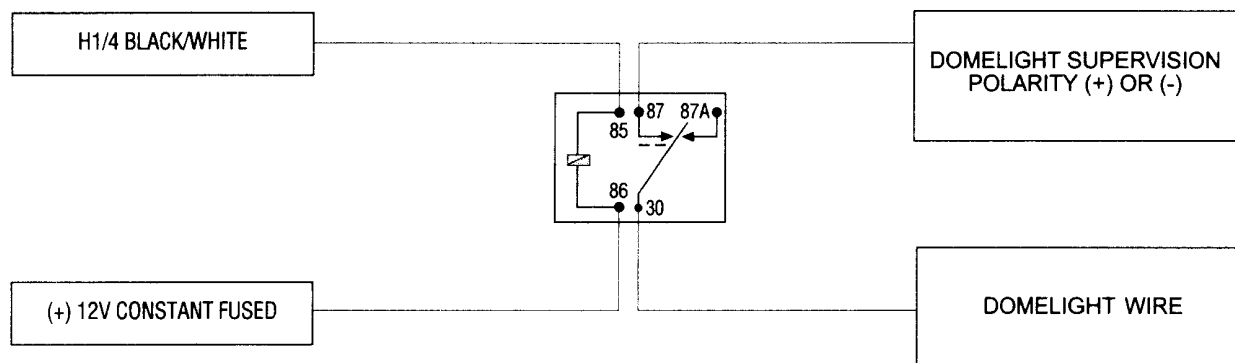
- A validity output will send a signal as long as the transmission is received.
- A latched output will send a signal continuously when the channel three button(s) is pressed and released. The signal will continue until channel three is pressed again.
- A latched/reset with ignition output works similar to the latched output, but will also reset (output will stop) when the ignition is turned on and then off.
- A 30 second timed output will send a signal for 30 seconds when channel three is pressed. This output can be shut off during the 30-second period by pressing Channel 3 again.
- This output can also be programmed to provide a second unlock pulse when the unlock button is pressed a second time after disarming the system. This can be used to unlock the passenger doors when installing progressive door locks.

IMPORTANT! Never use this wire to drive anything but a relay or a low-current input! This transistorized output can only supply 200 mA, and connecting directly to a solenoid, motor, or other high-current device will cause the module to fail.

H1/4 BLACK/WHITE (-) 200 mA domelight supervision output

Connect the H1/4 wire to the optional domelight supervision relay as shown in the following diagram:

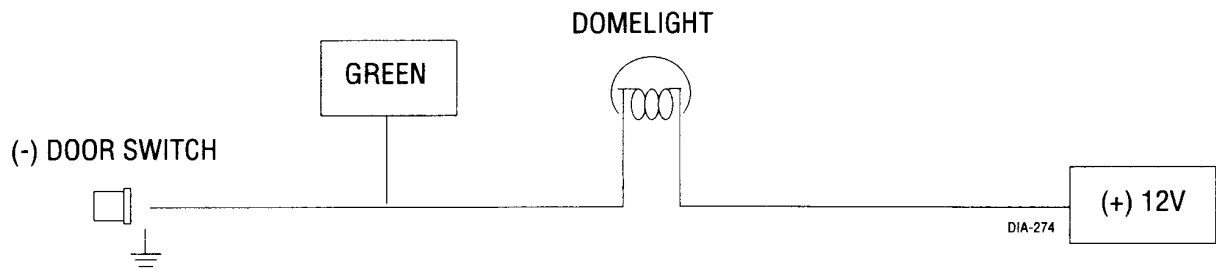
IMPORTANT! This output is only intended to drive a relay. It cannot be connected directly to the domelight circuit, as the output cannot support the current draw of one or more bulbs.



H1/5 GREEN (-) door trigger input

Most vehicles use negative door trigger circuits. Connect the green wire to a wire showing ground when any door is opened. When connecting to newer model vehicles there is generally a need to use individual door triggers. See DirectFax document 1076 for wiring instructions. This wire will report Zone 3.

NOTE: If using a door trigger wire that has a delay, Advanced Menu 2, feature 6 or the 998T Bitwriter can be used to turn Bypass Notification off.



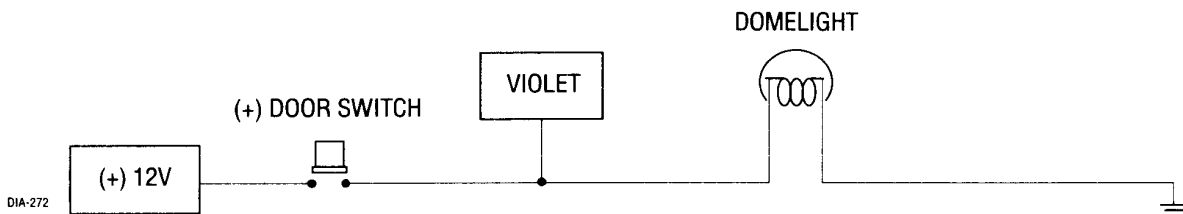
H1/6 BLUE (-) instant trigger input

This input will respond to a negative input with an instant trigger. It is ideal for hood and trunk pins and will report on Zone 1. It can also be used with Directed single-stage sensors. The H1/6 blue instant trigger wire can also be used to shunt sensors during operation of auxiliary channels or remote start. (See Bypassing Sensor Inputs section of this guide.)

H1/7 VIOLET (+) door trigger input

This type of dome circuit is used in many Ford products. Connect the violet wire to a wire that shows (+)12V when any door is opened. This wire will report Zone 3.

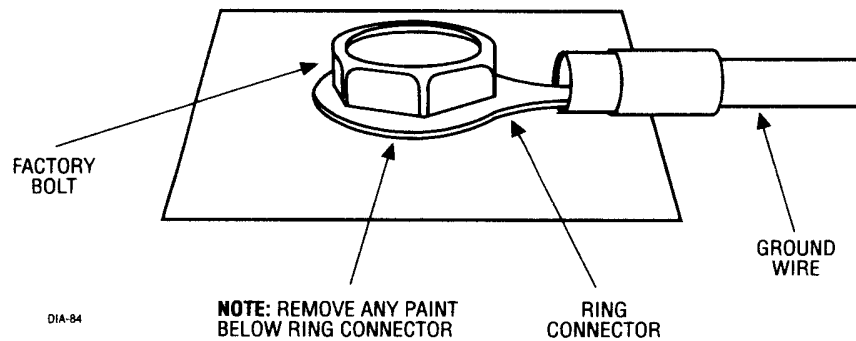
NOTE: If using a door trigger wire that has a delay, Advanced Menu 2, feature 6 or the 998T Bitwriter can be used to turn Bypass Notification off.



H1/8 BLACK (-) chassis ground connection

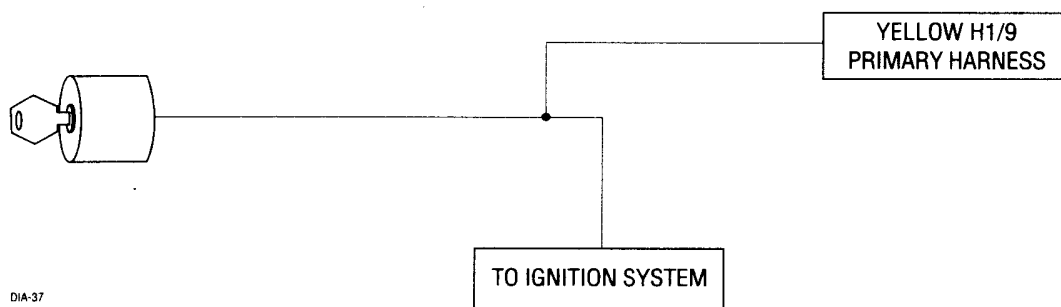
Connect this wire to a clean, paint-free sheet metal location (driver kick panel) using a factory bolt that DOES NOT have any vehicle component grounds attached to it. A screw should only be used when in conjunction with a two-sided lock washer. Under dash brackets and door sheet metal are not acceptable ground points. It is recommended that all security components be

grounded at the same location.



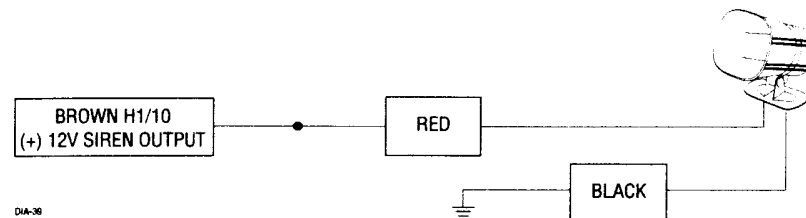
H1/9 YELLOW (+) ignition input

Connect this wire to the (+) 12 volts ignition wire. This wire is pre-wired to the starter kill relay and must show (+) 12 volts with the key in RUN position and during cranking. Take great care that this wire cannot be shorted to the chassis at any point.



H1/10 BROWN (+) siren output

Connect this to the RED wire of the Revenger® siren. Connect the BLACK wire of the siren to (-) chassis ground, preferably at the same point you connect the control module's BLACK ground wire.



H1/11 RED (+)12V constant power input

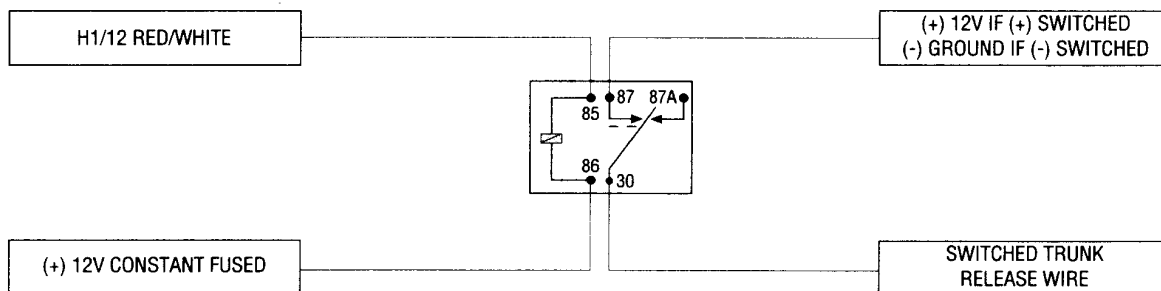
Before connecting this wire, remove the supplied fuse. Connect to the battery positive terminal or the constant 12V supply to the ignition switch.

NOTE: Always use a fuse within 12 inches of the point you obtain (+)12V. Do not use the 15 amp fuse in the harness for this purpose. This fuse protects the module itself.

H1/12 RED/WHITE 200 mA (-) channel 2 output

When the system receives the code controlling channel 2 for longer than 1.5 seconds, the RED/WHITE will supply an output as long as the transmission continues. This is often used to operate a trunk/hatch release or other relay/driven function.

IMPORTANT! Never use this wire to drive anything but a relay or a low-current input! The transistorized output can only supply 200 mA of current. Connecting directly to a solenoid, motor, or other high-current device will cause it to fail.



DIA-4

Door Lock Harness (H2), 3-PIN Connector

H2/A	Green	(-) Lock, (+) Unlock Output
H2/B	Empty	Unless Using 451M
H2/C	Blue	(-) Unlock, (+) Lock Output

IMPORTANT! The door lock outputs are low current and should not be attached directly to any high current device; they are only to be used to activate relays.

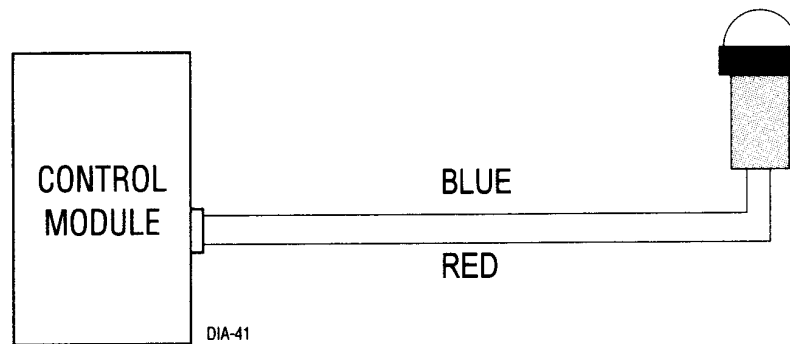
For detailed instructions about connecting to the vehicle's power door lock systems, refer to the Door Lock Wiring guide (Document No. 1041) available to authorized dealers only from the technical resources listed at the front of this guide.

Peripheral Plug-in Harness

Super Bright LED, 2-Pin WHITE Plug

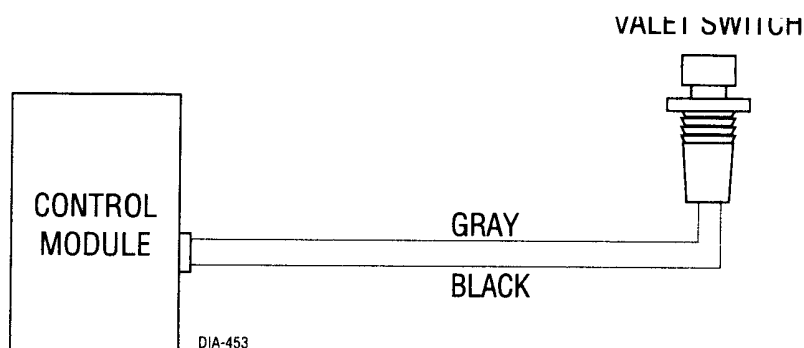
The super bright LED operates at (+) 2 volt DC and plugs into the two-pin WHITE port. Make sure the LED wires are not shorted to ground as the LED will be damaged. Multiple LED's can be used, but they must be wired in series. The LED fits into a 9/32-inch mounting hole. Be sure to check for clearance prior to drilling the mounting hole.

NOTE: Never use a BLUE LED in combination with a RED LED.



Valet/Program Switch, 2-Pin BLUE Plug

The Valet/Program button should be accessible from the driver's seat. It plugs into the BLUE port on the side of the unit. Since the system features Valet® by using the remote transmitter, the button can be well hidden. Consider how the button will be used before choosing a mounting location. Check for rear clearance before drilling a 9/32-inch hole and mounting the button. The GRAY wire in the two-pin plug may also be used as a (+) ghost switch input and can be connected to any (+) switch in the vehicle. (See Feature Descriptions section of this guide.)



Programmer Interface, 3-Pin BLACK Plug



The BLACK three-pin port connection is for programming the unit. When using the 998T Bitwriter®, it is possible to configure any and all of the programmable functions. For more information please refer to the guide packaged with the programmer.

Mounting the Antenna/Receiver

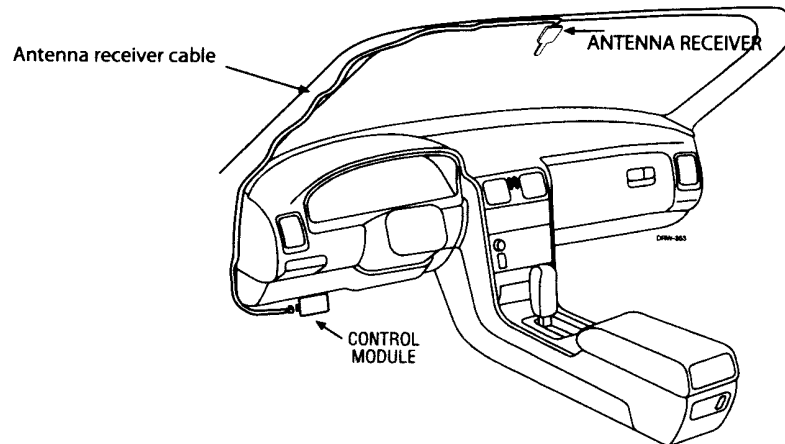
The antenna/receiver's position should be discussed with the vehicle owner prior to installation, since it will be visible to the vehicle's operator.

The best location for the Antenna/receiver is centered high on either the front or rear windshield. For optimal range, the antenna should be mounted vertically. It can be mounted horizontally in relation to the windshield or under the dashboard away from metal, but range will be diminished. Metallic window tint can also affect range, so this should be a consideration when determining the mounting location.

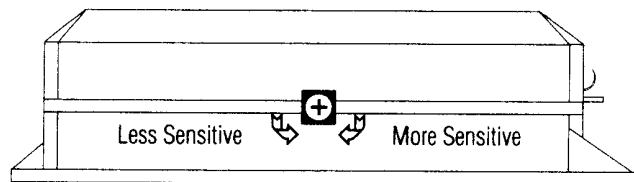
After determining the best mounting location, follow these steps:

1. Clean the mounting area with a quality glass cleaner or alcohol to remove any dirt or residue.
2. Plug the Antenna/receiver cable into the Antenna/receiver.
3. Mount the Antenna/receiver using the supplied double-sided tape.
4. Route the Antenna/receiver cable to the control module and plug it into the four-pin antenna connector.

Important! To achieve the best possible range, DO NOT leave the antenna receiver cable bundled under the dash. Always extend the cable full length during installation, regardless of the antenna mounting location.



On-Board Dual-Stage Shock Sensor



There is a dual-stage shock sensor inside the control unit. Adjustments are made via the rotary control as indicated in the diagram. Since the shock sensor does not work well when mounted firmly to metal, we do not recommend screwing down the control module. The full trigger of the on-board shock sensor reports Zone 2. (See Table of Zones section of this guide.)

Note: When adjusting the sensor, it must be in the same mounting location that it will be after the installation is completed. Adjusting the sensor and then relocating the module requires readjustment.

Optional Sensor Harness, 4-pin Connector

The four-pin sensor harness is optional, and is not included with this unit.

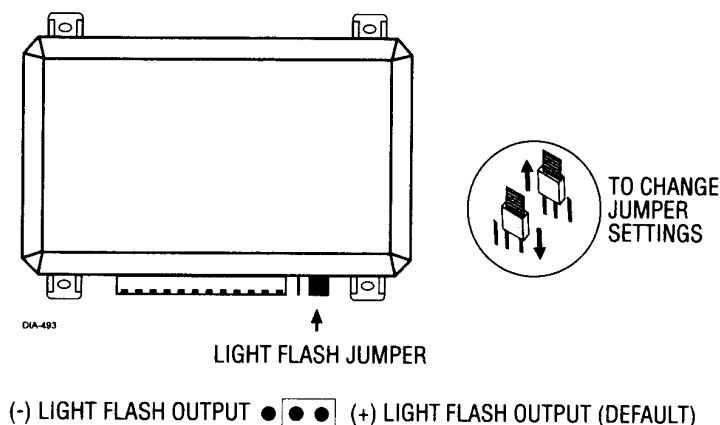
RED (+) 12V Constant and BLACK (-) Ground

These wires supply constant (+) 12 volts and ground to the optional sensor.

BLUE/GREEN (-) Multiplex Input

These wires are multiplex inputs. If a (-) input of less than 0.8 seconds is supplied to either wire, the Warn-Away response will occur. A (-) input of longer than 0.8 seconds to either wire will initiate the triggered sequence and report Zone 4.

Programming Jumper



Light Flash Jumper

This jumper is used to determine the light flash output. In the (+) position, the on-board relay is enabled and the unit will output (+)12V on the WHITE wire, H1/2. In the (-) position, the on-board relay is disabled. The WHITE wire, H1/2, will supply a 200 mA (-) output suitable for driving factory parking light relays.

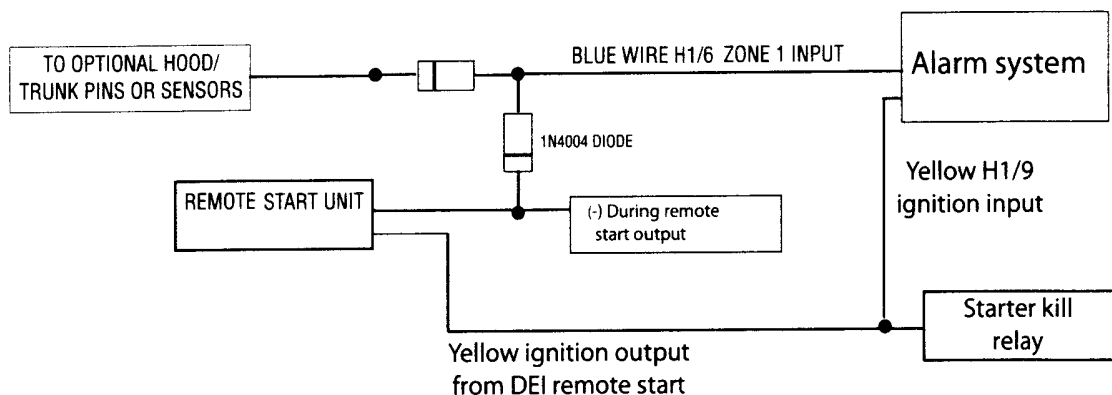
NOTE: For parking light circuits that draw 10 amps or more, the jumper must be switched to a (-) light flash output. P/N 8617 or a standard automotive SPDT relay must be used on the H1/2 light flash output harness wire.

Important! DO NOT connect the H1/2 light flash wire to a negative vehicle light flash wire before changing the programming jumper to the negative polarity position or damage to vehicle light circuit may occur.

Bypassing Sensor Inputs

There are times when you need to temporarily bypass all sensor inputs to the unit, such as when remote starting the vehicle. Anytime an auxiliary channel output is used, all inputs are bypassed for 5 seconds. During the 5 second bypass period, ground can be supplied to the H1/6 Blue wire without triggering the unit.

When the 5 second bypass period ends, if the unit sees ground on the H1/6 Blue wire, all trigger inputs except the door trigger input will remain bypassed until 5 seconds after ground is removed from the BLUE wire. The ignition input needs to be bypassed during remote start also. This can be done using the status and ignition output of a Directed Electronics remote engine starting unit as shown in the following diagram:



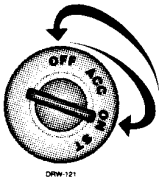
System Features Learn Routine

The System Features Learn Routine dictates how the unit operates. Due to the number of steps, they have been broken up into two menus. It is possible to access and change any of the feature settings using the Valet/Program switch. However, this process can be greatly simplified by using the 998T Bitwriter. Any of the settings can be changed and then assigned to a particular transmitter, up to four, a feature called Owner Recognition. Each time that particular transmitter is used to disarm the system, the assigned feature settings will be recalled. Owner Recognition is only possible when programming the unit via the 998T Bitwriter.

If the system was previously programmed using the 998T Bitwriter, the learn routine may be locked. If the siren generates one long chirp when attempting to program the unit, the learn routine is locked and must be unlocked using the 998T Bitwriter.



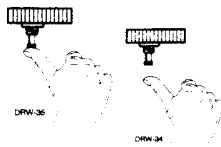
1. Open a door. (The H1/5 GREEN wire or the H1/7 VIOLET wire must be connected.)



2. Ignition. Turn the ignition on, then back off: (The H1/9 YELLOW wire must be connected.)

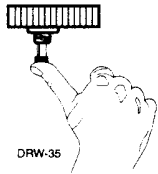


3. Select a Menu. Press and HOLD the Valet/Program switch: (The Valet/Program switch must be plugged into the blue port.) After three seconds the siren will chirp once indicating entry to the Basic Features Menu #1. If this is the menu you wish to access, release the button and go on to Step 4. If the button is not released, you will jump to the Advanced Features Menu #2 and the siren will chirp twice. Once you have selected the desired menu, release the Valet/Program button and then proceed to Step 4.






4.

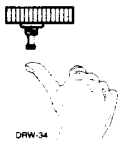
Select a Feature. Press and release the Valet/Program switch the number of times corresponding to the feature you wish to change. For example, to access the third feature, press and release the switch three times. Then press the switch once more and HOLD it. The siren will chirp the number of times equal to the step you have accessed.



5.

Program the Feature. While holding the Valet/Program switch, you can toggle the feature on and off using the remote transmitter. Pressing  will select the one chirp setting. Pressing  will select the two chirp setting. (See Systems Features menus)

NOTE: The Valet pulse count feature (2-5) and the Channel three timed output (2-9) have five possible settings each. Pressing  will toggle through all the two-chirp settings.



6.

Release the Valet/Program Switch.

- Once a feature is programmed:
- Other features can be programmed within the same menu.
- Another menu can be selected.
- The learn routine can be exited if programming is complete.

To access another feature in the same menu:

- Press and release the Valet/Program switch the number of times necessary to advance from the feature you just programmed to the next one you want to program.
- Then press the Valet/Program switch once more and HOLD it.

For example, if you just programmed the third feature in the menu and you would like to program the seventh feature in the menu, you would press and release the Valet/Program switch four times and then press it once more and hold it. The siren would chirp seven times to confirm access to the seventh feature.

To select another menu:

- Press and hold the Valet/Program switch.
- After three seconds, the unit will advance to the next menu and the siren will chirp, indicating which menu has been accessed.

For instance, if you just programmed some features in Menu #1 (Basic Features) and you wish to program a feature in Menu #2, you press and HOLD the Valet/Program button. After three seconds, the siren chirps twice indicating access to Menu #2.

To exit the learn routine do one of the following:

- Close the open door.
- Turn the ignition on.
- No activity for longer than 15 seconds.
- Press the Valet/Program switch too many times.

System Features Menus

Menu #1 - Basic Features

Items in bold text have been programmed to the default setting at the factory.

Feature Number	One Chirp Setting	Two-Chirp Setting
1-1	Active arming	Passive arming
1-2	Chirps ON	Chirps OFF
1-3	Ignition controlled door locks ON	Ignition controlled door locks OFF
1-4	Active locking only	Passive locking
1-5	Panic with ignition on	No panic with ignition on
1-6	0.8 second door lock pulses	3.5 second door lock pulses
1-7	Forced passive arming ON	Forced passive arming OFF
1-8	Automatic Engine Disable ON	Automatic Engine Disable OFF
1-9	Armed When Driving (AWD)	Vehicle Recovery System (VRS)
1-10	Code Hopping™ on	Code Hopping™ off

Menu #2 - Advanced Features

Feature Number	One Chirp Setting	Two-Chirp Setting
2-1	Siren	Horn honk
2-2	30-second siren duration	60-second siren duration*
2-3	Nuisance Prevention* Circuitry ON	Nuisance Prevention* Circuitry OFF
2-4	Progressive door trigger	Instant door trigger
2-5	Valet switch input: 1 pulse	Valet switch input: 2-5 pulses
2-6	Bypass Notification ON	Bypass Notification OFF
2-7	Ignition-controlled domelight ON	Ignition-controlled domelight OFF
2-8	Single unlock pulse	Double unlock pulse
2-9	Single lock pulse	Double lock pulse
2-10	Channel 3: Validity	Channel 3: latched/latched, reset with ignition/30-second timed/second unlock output*
2-11	Comfort Closure (On) (20 sec.)	Comfort Closure (Off)
<i>*The Bitwriter allows programming from 1-180 seconds.</i>		
<i>*Second unlock is only available if Feature 2-8 is programmed to single pulse.</i>		

Feature Descriptions

The features of the system are described below. Features that have additional settings that can be selected only when programming with the 998T Bitwriter are indicated by the following icon:



Menu #1 - Basic Features

1-1 ACTIVE/PASSIVE ARMING: When active arming is selected, the system will only arm when the transmitter is used. When set to passive, the system will arm automatically 30 seconds after the last door is closed. To alert the consumer of passive arming, the siren will chirp 20 seconds after the door is closed. This provides the consumer with an audible prior to the system actually arming. At the 30 second mark, the system will arm but the siren will not chirp.

1-2 Chirps ON/OFF: This feature controls the chirps that confirm the arming and disarming of the system.



1-3 IGNITION CONTROLLED DOOR LOCKS ON/OFF: When turned on, the doors will lock three seconds after the ignition is turned on and unlock when the ignition is turned off. The 998T Bitwriter will display separate steps for ignition lock and ignition unlock. They can be programmed on or off independently.

1-4 ACTIVE/PASSIVE LOCKING: If passive arming is selected in step 1-1, then the system can be programmed to either lock the doors when passive arming occurs, or only lock the doors when the system is armed via the transmitter. Active locking means the system will not lock the doors when it passively arms. Passive locking means that the system will lock the doors when it passively arms.

NOTE: Remember, when passive arming is selected, the unit will chirp 20 seconds after the last door is closed. The system does not actually arm or lock the doors until 30 seconds after the door has been closed.

1-5 PANIC WITH IGNITION ON: This step controls whether or not the Panic Mode is available with the ignition on. In some states, there are laws prohibiting a siren from sounding in a moving vehicle. This feature makes the system compliant with these regulations.

1-6 DOOR LOCK PULSE DURATION: Some European vehicles, such as Mercedes-Benz and Audi, require longer lock and unlock pulses to operate the vacuum pump. Programming the system to provide 3.5 second pulses, will accommodate the door lock interface in these vehicles. The default setting is 0.8 second door lock pulses.

1-7 FORCED PASSIVE ARMING ON/OFF: To use this feature, passive arming must be selected in step 1-1. When turned on, forced passive arming will ensure that the system will passively arm, even if a zone is left open or invalid. Forced passive arming occurs one hour after the ignition is turned off.


1-8 AUTOMATIC ENGINE DISABLE (AED) ON/OFF: AED is a full-time, passive starter disable that works independently of the security system. When turned on, the orange, ground-when-armed output (H1/1) will go active 30 seconds after the ignition is turned off. The LED will flash at half its normal rate when the ignition is turned off to indicate that AED is active and will interrupt the starter in 30 seconds. AED does not occur in Valet mode and can be bypassed using the emergency override procedure. The transmitter can also be used to disarm AED.

1-9 ARMED WHILE DRIVING/VEHICLE RECOVERY SYSTEM: In the default setting (Armed While Driving), the system can be armed with the ignition on. When armed, the ground-when-armed is not active and the sensors are bypassed. The door triggers will remain active. If programmed to the Vehicle Recovery System (VRS®) setting, VRS® will be activated.

1-10 CODE-HOPPING™ ON/OFF: The system uses a mathematical formula to change its code each time the transmitter and receiver communicate. This makes the group of bits or “word” from the transmitter very long. The longer the word is, the easier it is to block its transmission to the unit. Disabling the Code-Hopping™ feature lets the receiver ignore the Code-Hopping™ part of the transmitted word. As a result, the unit may have better range with Code-Hopping™ off.

Menu #2 - Advanced Features

2-1 SIREN/HORN HONK: The system can be programmed to output pulses instead of a continuous output when the system is triggered. This is useful to honk the factory horn in applications where a siren is undesirable. Remember that the unit is only capable of supplying 1 amp of current. A relay will be required to interface with most factory horn systems.

 **2-2 SIREN DURATION 30/60 SECONDS:** It is possible to program the unit to sound for 30 or 60 seconds during the triggered sequence. Some states have laws regulating how long a security system can sound. When using the 998T Bitwriter, the siren can be programmed to sound for any length of time ranging from 1 to 180 seconds. Using the SELECT button of the 998T Bitwriter will adjust the siren duration in one second increments.

2-3 NUISANCE PREVENTION® CIRCUITRY (NPC®) ON/OFF: NPC® stops repeated triggering of the same zone. If one zone is triggered three times in one hour, that zone is bypassed for one hour, starting from the time of the third trigger. During that hour, if the system detects a trigger on that zone again, the system resets the one hour timer. If one hour passes and the zone has not triggered again, the zone is activated and can trigger the system again. NPC® monitors sensor inputs and the door trigger, but does not bypass the ignition trigger at any time. If NPC® is turned off, the system will respond to repeated triggers on the sensor inputs and will do so indefinitely. Some states have laws regulating how many times a security system can trigger before it is considered a nuisance and the vehicle is towed away.

2-4 PROGRESSIVE DOOR TRIGGER ON/OFF: The system responds to a door trigger input with a progressive response. When the door is opened with the system armed, the siren will chirp 10 times prior to the full triggered sequence. The door trigger is still treated as an instant trigger and closing the door quickly will not prevent a full triggered sequence from occurring. If the progressive door trigger is programmed off, the full siren output will occur the moment the door is opened.

2-5 VALET PULSE COUNT ONE TO FIVE PULSES: The system can be programmed to count the number presses of the valet button before disarming the security system or VRS®. The factory default setting is one pulse. The unit can be set for two to five pulses using the two-chirp setting to select the pulse count. **Ghost Switch Option:** For added security, the GRAY wire on the two-pin Valet/Program can be connected to any switch in the vehicle that provides a positive (+) momentary pulse.



2-6 Bypass Notification ON/OFF: when programmed on, any active zone input to the system during arming will generate a bypass notification chirp. When programmed OFF, no bypass notification chirps will be generated if any zone is active during arming.

2-7 Ignition-controlled DOMELIGHT SUPERVISION ON/OFF: If turned on, the system will turn on the domelight for 30 seconds when the ignition is turned off. The optional domelight supervision feature must be installed.

2-8 DOUBLE PULSE UNLOCK ON/OFF: Some vehicles require two pulses on a single wire to unlock the doors. When the double pulse unlock feature is turned on, the BLUE H2/C wire will supply two negative pulses instead of a single pulse. At the same time, the GREEN H2/A wire will supply two positive pulses instead of a single pulse. This makes it possible to directly interface with double pulse vehicles without any extra parts.

2-9 Double/Single Pulse Lock: Some vehicles require two pulses on a single wire to lock the doors. When the double pulse lock feature is turned on, the BLUE H2/C wire will supply two positive pulses instead of a single pulse. At the same time the GREEN H2/A wire will supply two negative pulses instead of a single pulse. This makes it possible to directly interface with double pulse vehicles without any extra parts.

2-10 CHANNEL 3 VALIDITY/LATCHED/LATCHED RESET WITH IGNITION/30 SECOND TIMED/SECOND UNLOCK OUTPUT: Channel 3 can be programmed for these output configurations. The unit is set to the default validity output. To change the configuration use the two-chirp setting to toggle to the different configurations.

2-11 COMFORT CLOSURE: The system can be programmed to close the windows when the system is armed. A 20-second output starts 200mS after the last  button pulse. The comfort closure output will be cancelled if the  button is pressed. If programmed ON, the lock output wire will provide this function.

NOTE: Comfort closure is deleted if one-time bypass is activated.

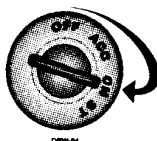
Transmitter/Receiver Learn Routine

The system comes with two transmitters that have been taught to it. The system can store up to four different transmitter codes in memory. Use the following learn routine to add transmitters to the system or to change button assignments if desired.

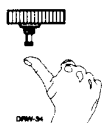
If the system was previously programmed using the 998T Bitwriter, the learn routine may be locked. If the siren generates one long chirp when attempting to program the unit, the learn routine is locked and must be unlocked using the 998T Bitwriter before proceeding.



1. Open a door. (The GREEN wire, H1/5, or the VIOLET, H1/7 must be connected.)



2. Turn the ignition on. (The YELLOW wire, H1/9 must be connected.)



3. Select the receiver channel: Press and release the Valet/Program button the number of times necessary to access the desired channel.

NOTE: If adding a remote, a button must be taught to the unit in the Channel 1 or Channel 5 position prior to programming other channels.

Press and hold the Valet/Program button once more. The siren will chirp and the LED will blink the number of times corresponding to the channel accessed.

Channel Number	Function	Wire Color
1	Arm/Disarm	
2	Panic only	
3	Silent Mode/Remote Valet/Trunk Release	RED/WHITE
4	Remote Start or other accessories	WHITE/BLUE
5	Arm only	
6	Disarm only	
7	Auto-learn standard configuration* (four-button transmitter)	
8	Auto-learn three-button configuration*	
9	Delete all transmitters	

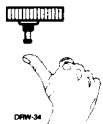
*NOTE: For Auto Learn Configurations, see Transmitter Configurations section of this guide.



4. Press the transmitter button: While holding the Valet/Program button, press the button from the transmitter that you wish to assign to the selected channel. The unit will chirp indicating successful programming. It is not possible to teach a transmitter button to the system more than once.

Channels #2, 5, 6: Channels 2, 5, and 6 are used to assign the arm, disarm and panic functions to separate buttons on the remote control. Teaching a button to Channel 5 or Channel 1 erases some information about that remote from memory, and auxiliary functions that are desired may have to be reprogrammed.

Channel #9: If any button from a known transmitter is programmed to Channel 9, all transmitters will be erased from memory and the system features will revert to the default settings. This is useful in cases where the one of the customer's transmitters is lost or stolen. This will erase any lost or stolen transmitters from the system's memory. It can also be used to start from scratch if the transmitter buttons were programmed incorrectly.



5. Release. Once the code is learned, the Valet/Program button can be released.

To exit the learn routine:

One long chirp indicates that Learn Routine has been exited. Learn Routine will be exited if any of the following occurs:







- Ignition is turned off.
- Door is closed.
- Valet/Program button is pressed too many times.
- More than 15 seconds elapse between steps.

Transmitter Configurations




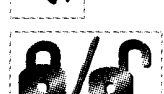

The transmitters can be programmed with the standard or three-button configurations by using the Auto Learn functions in the Transmitter/Receiver Learn Routine.

Standard Configuration

When programmed for standard configuration, the transmitter buttons are assigned to the following functions:

	operates	Arm only
	operates	Disarm only
	operates	Channel 2 and Silent Mode
	operates	Panic
 and 	operate	Channel 3

Three-button configuration - Optional not included

	operates	Arm/Disarm
	operates	Channel 2 and Silent Mode
	operates	Panic
 and 	operate	Channel 3

NOTE: Multi Level Security Arming feature is not available with the three-button.

Diagnostics

The system's microprocessor monitors and reports all active and violated zones when arming and disarming. LED flashes indicate the active or violated zone; siren chirps indicate system status.

Arm/Disarm Diagnostics

The number of siren chirps will indicate the status of the alarm when arming and disarming. For information on which zone is active or has been violated refer to the Table of Zones.

System Status Chirps

Action	Number of Chirps	Description
Arm	1	System armed
Arm	1 (3 second delay), 1	System armed with Bypass Notification
Disarm	2	System disarmed
Disarm	4	System disarmed with Tamper Alert
Disarm	5	System disarmed NPC® active

Table of Zones

Zone No.	Trigger type	Input description
1	Instant	H1/6 BLUE - Connect to optional hood/trunk pins.
2	On-board shock sensor	Heavy impact detected by the on-board shock sensor.
3	Two-stage, progresses from	Door switch circuit. H1/5 GREEN or H1/7 VIOLET warning to full alarm
4	Multiplexed Input	BLUE and GREEN wires of optional sensor plug. Inputs shorter than 0.8 seconds will trigger a Warn Away response, while inputs longer than 0.8 seconds will instantly trigger a full alarm sequence and report Zone 4.
5	Two-stage (similar to doors)	Ignition input. H1/9 YELLOW.

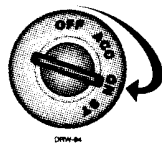
NOTE: The Warn Away® response does not report on the LED.

Long Term Event History

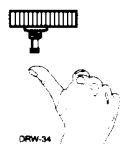
The system stores the last two full triggers in memory. These are not erasable. Each time the unit sees a full trigger, the older of the two triggers in memory will be replaced by the new trigger. To access long term event history:



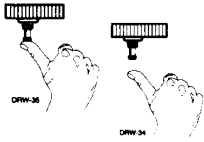
1. With the ignition off, press and HOLD the Valet/Program switch.



2. Turn on the ignition.



3. Release the Valet/Program switch.



4. Press and release the Valet/Program switch within 5 seconds. The LED will flash in groups indicating the last two zones that triggered the unit. The LED will flash for one minute or until the ignition is turned off.

NOTE: The Warning Zone triggers are not stored to memory and will not be reported.

Multi-Level Security Arming

Multi-Level Security arming allows the operator to select which inputs and sensors are active during a particular arming cycle. For a full description of Multi-Level Security Arming operation for testing purposes refer to the owner's manual.

Optional Vehicle Recovery System (VRS)

VRS is an optional feature designed to disable a vehicle during a carjacking event. It must be programmed in the features menu and the Failsafe Starter Kill must be installed for it to work properly. For operational instructions when testing VRS refer to the owner's manual.

Nuisance Prevention® Circuitry

Nuisance Prevention Circuitry bypasses any zone that triggers the system more than three times within a one hour period. For a full description of NPC operations refer to the owner's manual.

IMPORTANT: When testing the systems sensor and trigger inputs reset NPC by turning on the ignition after every third system trigger.

Rapid Resume Logic

Rapid Resume Logic ensures that the when the system is powered up it will return to the same state it was in when power is disconnected. For a full description of Rapid Resume Logic refer to the owner's manual.

Troubleshooting

Starter kill doesn't work.

- Is the correct starter wire being interrupted? If the car starts when the starter kill relay is completely disconnected, the wrong starter wire has been cut and interrupted.
- YELLOW wire is not connected to true ignition. It is connected to an accessory circuit.

Shock sensor doesn't trigger the alarm.

- Has the NPC® system been triggered? If so, you will hear five chirps when disarming. To check this, turn the ignition key on and off to clear the NPC® from memory, and then retest the shock sensor. For a detailed description of NPC®, see Owner's Guide.

Door input does not immediately trigger full alarm. Instead, I hear chirps for the first three seconds.

- That's how the progressive two-stage door input works! This is the instant response feature of this system. Even if the door is closed immediately, the system provides an instant trigger by chirping, and then progressing to a constant siren.

Closing the door triggers the system, but opening the door does not.

- Have you correctly identified the type of door switch system? This happens often when the wrong door input has been used.

System will not passively arm until it is remotely armed and then disarmed.

- Are the door inputs connected? Is a blue wire connected to the door trigger wire in the vehicle? Either the green H1/5 or the violet H1/7 should be used instead.

Door input does not respond with the progressive trigger, but with immediate full alarm.

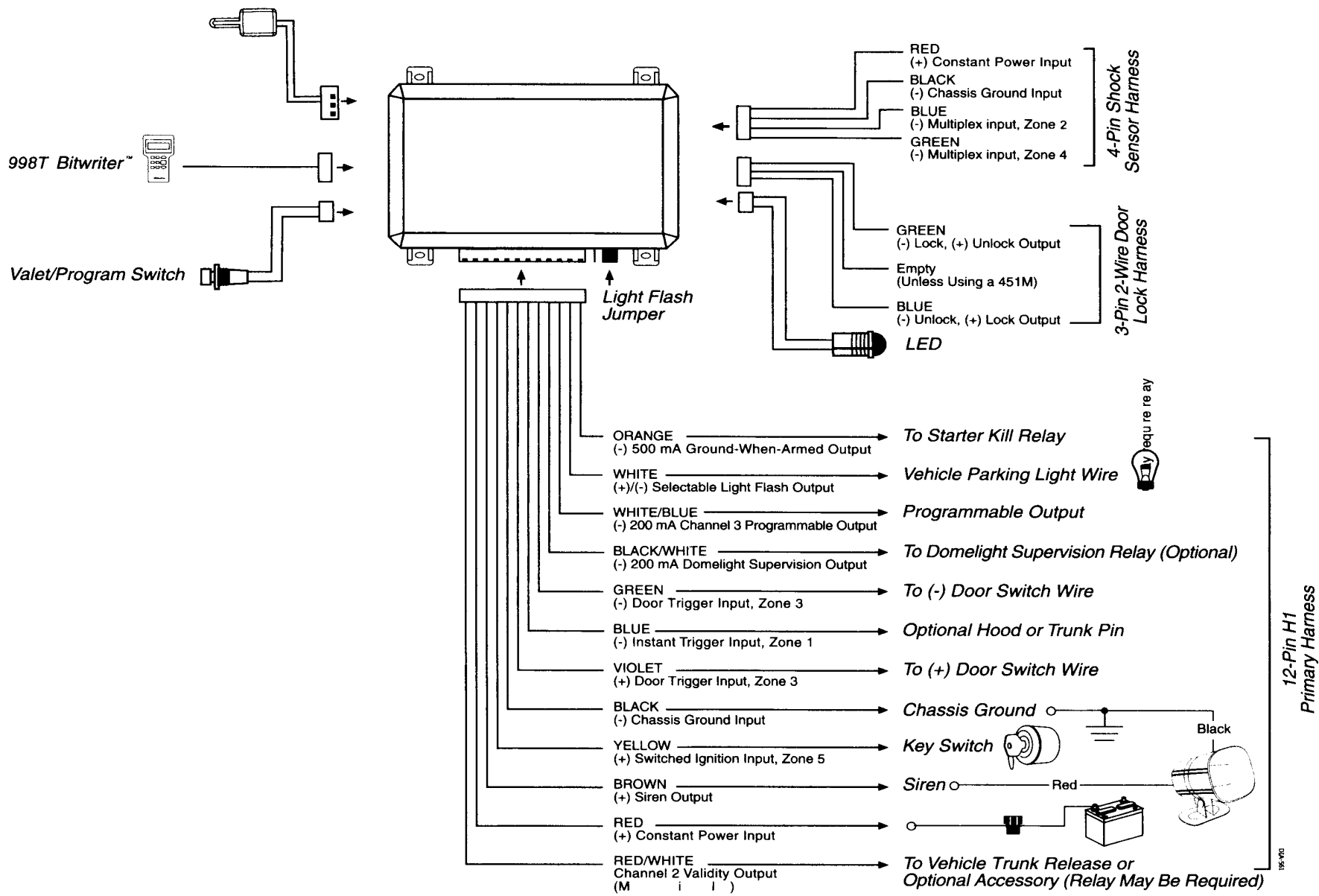
- What zone does the LED indicate? If the LED indicates that the impact sensor caused the trigger, the sensor may be detecting the door opening. Reducing the sensitivity or relocating the sensor can often solve this problem. If the LED indicates that the door caused the trigger, you may have programmed the progressive door trigger off. (See Feature 2-4 in the Feature Descriptions section of this guide.)

The Valet button doesn't work.

- Is it plugged into the correct socket? Check the System Features Learn Routine for the programmed Valet pulse count.

Status LED doesn't work.

- Make sure that it is plugged in. (See Plug-In Harnesses section of this guide.) Is the LED plugged into the correct socket?



Designed and Engineered in the USA



N3305P 2008-12

Vista, CA 92081

www.directed.com

© 2008 Directed Electronics. — All rights reserved.



Thank you for selecting an innovative product from Directed Electronics, Inc. (DEI®). Since its inception, DEI has brought the proven advantages of custom micro-controllers and innovative technologies to the automotive industry. DEI is committed to delivering the best products we know how to provide and constantly working to improve our products, quality, delivery and customer friendly features.

As a recipient of numerous patents, DEI has established new standards in electronic design, automated manufacturing and dealer support. DEI's electronic products are sold and serviced worldwide.

This product is covered by one or more of the following U.S. patents:

303,223	333,633	333,634	333,635	333,636	333,795
340,000	344,905	345,317	345,711	347,190	348,622
352,685	383,689	383,690	390,830	392,944	4,327,444
4,383,242	4,438,426	4,553,127	4,584,569	4,794,368	4,887,064
4,897,630	4,922,224	4,987,402	5,103,221	5,117,217	5,132,660
5,193,141	5,245,694	5,285,186	5,315,285	5,357,560	5,532,670
5,534,845	5,572,185	5,646,591	5,656,997	5,712,638	5,783,989
5,798,711	5,872,519	5,900,806	5,907,195	5,914,667	5,945,936
5,952,933	5,990,786	6,093,979			

International Patents:

Australia:	694,925
Canada:	1,315,859 and 2,067,099
Taiwan:	91817

Other patents pending

MKG-I 7/00
LADDEIN7

1. ☐ Mr. 2. ☐ Mrs. 3. ☐ Ms. 4. ☐ Miss
First Name Initial Last Name

X F G 0 1 - 0 1

Street Apt. No.

City State ZIP Code

E-mail

2. Your date of birth: /
Month Year

3. Marital status: 1. ☐ Married 2. ☐ Single

4. Date of purchase: / /
Month Day Year

5. Model number:

6. Name of store where purchased:

7. Price paid (excluding sales tax): \$.00

8. Which Directed Electronics product did you purchase?
- 01. ☐ AutoCommand Security System with Remote Start
 - 02. ☐ AutoCommand Remote Start System
 - 03. ☐ Avital Security System
 - 04. ☐ Avital Security System with Remote Start
 - 05. ☐ Avital Remote Start System
 - 06. ☐ Boa Security System
 - 07. ☐ Boa Remote Start System
 - 08. ☐ Boa Keyless Entry System
 - 09. ☐ Boa Garage Parking Sensor System
 - 10. ☐ Clifford GPS Tracking System
 - 11. ☐ Clifford Security System
 - 12. ☐ Clifford Security System with Remote Start
 - 13. ☐ Clifford Remote Start System
 - 14. ☐ Clifford Keyless Entry System
 - 15. ☐ Directed Electronics Inc., Security Accessory
 - 16. ☐ Directed Electronics Inc., Parking Sensor System
 - 17. ☐ First Defense Security System
 - 18. ☐ Hornet Security System
 - 19. ☐ Hornet Security System with Remote Start
 - 20. ☐ Merlin Security System
 - 21. ☐ Python GPS Tracking System
 - 22. ☐ Python Security System
 - 23. ☐ Python Security System with Remote Start
 - 24. ☐ Python Remote Start System
 - 25. ☐ Python Keyless Entry System
 - 26. ☐ Ready Remote Start System
 - 27. ☐ Valet Remote Start System
 - 28. ☐ Valet Keyless Entry System
 - 29. ☐ Viper GPS Tracking System
 - 30. ☐ Viper Security System
 - 31. ☐ Viper Security System with Remote Start
 - 32. ☐ Viper Remote Start System
 - 33. ☐ Viper Keyless Entry System
 - 34. ☐ Wasp Security System

9. What type of vehicle will this product be used in?
- 1. ☐ Car 6. ☐ Motorcycle
 - 2. ☐ Truck 7. ☐ Boat
 - 3. ☐ SUV 8. ☐ Motor home
 - 4. ☐ Van 9. ☐ Other
 - 5. ☐ MiniVan

10. In what vehicle will this product be used?

Make of vehicle:

Model name:

VIN #:

Year: A. ☐ Bought New
B. ☐ Bought Used
C. ☐ Leased
D. ☐ Leased Used

11. How did you first become aware of this product? (check one)

- 01. ☐ Local newspaper 07. ☐ Radio commercial
- 02. ☐ Yellow pages 08. ☐ Salesperson's recommendation
- 03. ☐ Magazine advertisement 09. ☐ Motorsports sponsorship
- 04. ☐ TV commercial 10. ☐ Internet
- 05. ☐ Magazine article/ review 11. ☐ Other
- 06. ☐ Friend/Relative's recommendation

12. What factors most influenced the purchase? (check up to three)

- 01. ☐ Directed's reputation 10. ☐ Rebate/Promotion
- 02. ☐ Brand's reputation 11. ☐ Style/Design/Color
- 03. ☐ Experience with Directed product 12. ☐ Dealer proximity
- 04. ☐ Experience with dealer 13. ☐ Friend's recommendation
- 05. ☐ Value/Price 14. ☐ Salesperson recommendation
- 06. ☐ Warranty 15. ☐ Ease of installation
- 07. ☐ Special features 16. ☐ Compatibility with vehicle
- 08. ☐ Quality/Durability 17. ☐ Other
- 09. ☐ Sound board/in-vehicle demo

13. What benefits of this product most influenced your decision to purchase? (check up to three)

- 01. ☐ Improved security 12. ☐ Functionality
- 02. ☐ Improved convenience 13. ☐ Warranty
- 03. ☐ Improved performance 14. ☐ Price/Value
- 04. ☐ Ability to watch video in vehicle 15. ☐ Rebate/Promotion
- 05. ☐ Used by autosound competitors 16. ☐ Immediate availability
- 06. ☐ Compatibility with vehicle 17. ☐ Friend's recommendation
- 07. ☐ Ease of installation 18. ☐ Salesperson recommendation
- 08. ☐ Style/Design/Color 19. ☐ Dealer proximity
- 09. ☐ Special Features 20. ☐ Other
- 10. ☐ Quality/Durability
- 11. ☐ Increase vehicle value

14. What other brands did you seriously consider before making this purchase?

- 1. ☐ None, only this brand 5. ☐ Bulldog
- 2. ☐ Other Directed Brands only 6. ☐ Ungo
- 3. ☐ Code Alarm 7. ☐ Alpine
- 4. ☐ Black Widow 8. ☐ Crime Stopper

15. Which of the following publications do you read regularly (three out of the last four issues)? (check all that apply)

- 01. ☐ Car and Driver 11. ☐ Road & Track
- 02. ☐ Car Audio and Electronics 12. ☐ Rolling Stone
- 03. ☐ Car Sound and Performance 13. ☐ SKATEboarding
- 04. ☐ Hot Boat 14. ☐ Ski
- 05. ☐ Import Tuner 15. ☐ Snowboard
- 06. ☐ Import Racer 16. ☐ Spin
- 07. ☐ Lowrider 17. ☐ Sport Compact Car
- 08. ☐ Mini Truckin' 18. ☐ Sport Truck
- 09. ☐ Motor Trend 19. ☐ Street Trucks
- 10. ☐ Performance Auto & Sound 20. ☐ Super Street
- 21. ☐ Truckin'
- 22. ☐ Working Woman
- 23. ☐ Other

16. Not including yourself, what is the GENDER and AGE (in years) of children and other adults living in your household?

- 1. ☐ No one else in household 2. ☐ Child under 1 year

Male	Female	Age	Male	Female	Age
1. <input type="checkbox"/>	2. <input type="checkbox"/>	yrs.	1. <input type="checkbox"/>	2. <input type="checkbox"/>	yrs.

1. <input type="checkbox"/>	2. <input type="checkbox"/>	yrs.	1. <input type="checkbox"/>	2. <input type="checkbox"/>	yrs.
-----------------------------	-----------------------------	------	-----------------------------	-----------------------------	------

17. Occupation: (check all that apply)

You	Spouse
Professional/Technical.....	<input type="checkbox"/> 1. <input type="checkbox"/>
Upper Management/Executive	<input type="checkbox"/> 2. <input type="checkbox"/>
Middle Management	<input type="checkbox"/> 3. <input type="checkbox"/>
Sales/Marketing	<input type="checkbox"/> 4. <input type="checkbox"/>
Clerical/Service Worker	<input type="checkbox"/> 5. <input type="checkbox"/>
Tradesman/Machine Operator/Laborer ...	<input type="checkbox"/> 6. <input type="checkbox"/>

18. Are you or your spouse:

You	Spouse
A Homemaker?	<input type="checkbox"/> 1. <input type="checkbox"/>
Retired?	<input type="checkbox"/> 2. <input type="checkbox"/>
A Student?	<input type="checkbox"/> 3. <input type="checkbox"/>
Self Employed/Business Owner?	<input type="checkbox"/> 4. <input type="checkbox"/>
Working from a Home Office?	<input type="checkbox"/> 5. <input type="checkbox"/>
In the Military?	<input type="checkbox"/> 6. <input type="checkbox"/>
A Veteran?	<input type="checkbox"/> 7. <input type="checkbox"/>

19. Which group describes your annual family income?

- 01. ☐ Under \$15,000 08. ☐ \$75,000-\$99,999
- 02. ☐ \$15,000-\$19,999 09. ☐ \$100,000-\$124,999
- 03. ☐ \$20,000-\$29,999 10. ☐ \$125,000-\$149,999
- 04. ☐ \$30,000-\$39,999 11. ☐ \$150,000-\$174,999
- 05. ☐ \$40,000-\$49,999 12. ☐ \$175,000-\$199,999
- 06. ☐ \$50,000-\$59,999 13. ☐ \$200,000-\$249,999
- 07. ☐ \$60,000-\$74,999 14. ☐ \$250,000 & over

20. Level of education: (check highest level completed)

- 1. ☐ Completed High School
- 2. ☐ Completed College
- 3. ☐ Completed Graduate School

21. Which credit cards do you use regularly?

- 1. ☐ American Express, Diners Club
- 2. ☐ MasterCard, Visa, Discover
- 3. ☐ Department Store, Oil Company, etc.
- 4. ☐ Do not use credit cards

22. For your primary residence, do you:

- 1. ☐ Own? 2. ☐ Rent?

23. Please tell us how many magazines your household:

- | A. Subscribes to | B. Purchases at Stores/Newsstands |
|---|---|
| 1. <input type="checkbox"/> 1-3 per month | 1. <input type="checkbox"/> 1-3 per month |
| 2. <input type="checkbox"/> 4+ per month | 2. <input type="checkbox"/> 4+ per month |

24. Which of the following do you plan to do within the next 6 or 12 months?

	1-6 Months	7-12 Months
Buy/Lease a New Vehicle	<input type="checkbox"/>	1. <input type="checkbox"/>
Buy/Lease a Used Vehicle	<input type="checkbox"/>	2. <input type="checkbox"/>

25. Please check all that apply to your household.

- | | |
|---|--|
| 01. <input type="checkbox"/> Shop by Catalog/Mail | 07. <input type="checkbox"/> Have a Cat |
| 02. <input type="checkbox"/> Shop via the Internet | 08. <input type="checkbox"/> Own a Wireless/Cellular Phone |
| 03. <input type="checkbox"/> Member of Frequent Flyer Program | 09. <input type="checkbox"/> Subscribe to an Online/Internet Service |
| 04. <input type="checkbox"/> Donate to Charitable Causes | 10. <input type="checkbox"/> Speak Spanish |
| 05. <input type="checkbox"/> Own a Compact Disc Player | 11. <input type="checkbox"/> Home Workshop/Do-It-Yourself |
| 06. <input type="checkbox"/> Have a Dog | |

26. To help us understand our customers' lifestyles, please indicate the interests and activities in which *you or your spouse* enjoy participating on a *regular* basis.

Home Life

- 01. ☐ Grandchildren
- 02. ☐ Needlework/Knitting
- 03. ☐ Sewing
- 04. ☐ Flower Gardening
- 05. ☐ Vegetable Gardening
- 06. ☐ Crafts
- 07. ☐ Automotive Work
- 08. ☐ Photography
- 09. ☐ Home Video Recording
- 10. ☐ Pay Bills Online

Good Life

- 11. ☐ Cultural/Arts Events
- 12. ☐ Fashion Clothing
- 13. ☐ Foreign Travel
- 14. ☐ Cruise Ship Vacations
- 15. ☐ Travel in USA
- 16. ☐ Gourmet Cooking/Fine Foods
- 17. ☐ Wines

- 18. ☐ Self-Improvement

- 19. ☐ Watching Sports on TV
- 20. ☐ NASCAR

Investing & Money

- 21. ☐ Real Estate Investments
- 22. ☐ Stocks/Bond Investments
- 23. ☐ Contests/Sweepstakes
- 24. ☐ Casino Gambling
- 25. ☐ Moneymaking Opportunities

Sports, Fitness & Health

- 26. ☐ Bicycling
- 27. ☐ Golf
- 28. ☐ Physical Fitness/Exercise
- 29. ☐ Running/Jogging
- 30. ☐ Snow Skiing
- 31. ☐ Tennis
- 32. ☐ Health/Natural Foods
- 33. ☐ Dieting/Weight Control
- 34. ☐ Walking for Health

Great Outdoors

- 35. ☐ Camping/Hiking
- 36. ☐ Fishing
- 37. ☐ Hunting/Shooting
- 38. ☐ Power Boating
- 39. ☐ Sailing
- 40. ☐ Recreational Vehicles (RVs)
- 41. ☐ Wildlife/Environmental Issues

Hobbies & Interests

- 42. ☐ Buy Prerecorded Videos/DVDs
- 43. ☐ Listen to Records/Tapes/CDs
- 44. ☐ Avid Book Reading
- 45. ☐ Bible/Devotional Reading
- 46. ☐ Art/Antique Collecting
- 47. ☐ Stamp/Coin Collecting
- 48. ☐ Collectibles
- 49. ☐ Our Nation's Heritage
- 50. ☐ Electronics
- 51. ☐ Science Fiction
- 52. ☐ Science/ New Technology

27. Using the numbers in the above list, please indicate your 3 most important activities:

Thanks for taking the time to fill out this questionnaire. Your answers will be used for market research studies and reports. They will also allow you to receive important mailings and special offers from a number of fine companies whose products and services relate directly to the specific interests, hobbies, and other information indicated above. Through this selective program, you will be able to obtain more information about activities in which you are involved and less about those in which you are not. Please check here if, for some reason, you would prefer *not* to participate in this opportunity. ☐

Failure to return this card will not diminish your warranty rights.

Copyright © 2005 All Rights Reserved

540-0070 (A)
Please seal with tape. Do not staple.

Please send products and other
correspondence to:

Directed Electronics Inc.
1 Viper Way
Vista, CA 92081

X F G 0 1 - 0 1

Directed[®]
E L E C T R O N I C S , I N C .

PO BOX 174391
DENVER CO 80217-4391



First-Class
Postage
Required
Post Office will
not deliver
without proper
postage.



PRODUCT REGISTRATION

Directed[®]
ELECTRONICS, INC.
Security

RETURN THIS CARD NOW FOR:

- **Product Protection**

With the information you provide we can confirm the date of purchase of your product.
This confirmation is of benefit to you, especially if your original proof of purchase is lost.

- **Proof of Ownership**

Your model number, serial number, and other information will be kept in our files
for up to ten years.